Compilation: Hunters Point Press Responses – (2016 - 2018)

2018

December 13, 2018

SF Media Company (SF Examiner & SF Weekly), Ida Mojadad

Hello Margot, Is the Department of Energy proposal expected to impact the Hunters Point shipyard cleanup and if so, how? Looking to hear back, however brief, by this afternoon so I can determine whether to move this forward.

Response:

The Department is Energy's proposal will not have an impact at Hunters Point. A 2004 US Navy historical radiological assessment documents nuclear fuel rods were never handled at Hunters Point. Ships that had nuclear reactors were berthed there between 1985 and 1989, but no work was conducted on the fuel rods.

December 12, 2018

SF Chronicle, Jason Fagone/Cynthia Dizikes

Hi Soledad. A quick question about sea level rise and the former naval shipyard in SF. We saw a brief discussion of this issue in an EPA Q&A that is attached to this message. Here's the passage on Page 2:

"The shorelines are being designed with protections that take into account sea level rise. For example, at the Parcel E-2 landfill site, when complete, the combined size of the revetment wall and sea wall will be 35 feet wide and twelve feet higher than current average sea level. The walls are built to withstand future sea level rise, severe earthquakes and waves as high as any experienced in the past one hundred years. These walls are just one part of a comprehensive protection system, which also includes a six-foot thick cover. In addition, groundwater is sampled twice a year to check if contaminants have moved toward the San Francisco Bay."

Do you have a report on the revetment wall that says it will be 12 feet higher than current sea level? Can you send that to us? And are there other EPA documents / reports on shoreline protection at HPNS that you can send?

Response:

An example of the revetment wall design discussion can be found in the Navy's Final Remedial Design Package, Parcel E-2, Hunters Point Naval Shipyard, San Francisco, CA, August 15, 2014. Specifically, key discussions appear in Section 3.6 Shoreline Revetment (Page 3-35) and Section 3.6.6 Crest Elevation (Page 3-41) of the Final Parcel E-2 Remedial Design Package, which are pasted below. Other portions of Section 3.6 may be informative. The entire document can be found at the following link (the cited references are in the first file):

[HYPERLINK "https://urldefense.proofpoint.com/v2/url?u=https-3A__www.envirostor.dtsc.ca.gov_public_final-5Fdocuments2-3Fglobal-5Fid-3D38440005-26doc-5Fid-3D5005528&d=DwMFAg&c=B73tqXN8Ec0ocRmZHMCntw&r=3j3FP3gDeW85mXD7NlwUVqf3NxyaLFJcYDbvV8Oanhs&m=kXLPu_GGEi6ulY4jUmfXhdzValynfxX6b1_lRlAHJKU&s=nU1AYZVk8Jg86ZjltD--xCLxPT_J34d2mOKsg4VEXQw&e="]

Section 3.6 Shoreline Revetment

"The revetment would be installed along approximately 1,800 feet of shoreline where Parcel E-2 meets Parcel F. The revetment will be approximately 35 feet wide3, and the crest elevation will be approximately +9 feet msl. In addition, a 3-foot-high concrete seawall will be incorporated into the crest of the revetment to accommodate wave runup. The sea wall was designed as an alternative to placing additional soil and armor rock to reach the design elevation (+12 feet msl), thereby providing an acceptable level of protection while minimizing the fill volume and associated weight of the shoreline revetment."

Section 3.6.6 Crest Elevation:
"The final design elevation of +12 feet msl would accommodate wave runup from two future scenarios and provide an additional 1 foot of freeboard during these two scenarios (more than 7 feet of freeboard would be provided at MHHW under normal wind and wave conditions). The 3-foot-tall seawall will also be protective of the durable cover over the landward portion of the site, and will not restrict sight lines to the bay."

December 7, 2018
SF Curbed, Chris Roberts
Following up on the phone conversation I had with Margot yesterday, working on a story about the contracting history of Tetra Tech, the company whose work at Hunters Point in San Francisco showed signs of fraud.

As you know, the company has won numerous government contracts since the problems at Hunters Point, including a $240 million contract from the Navy to clean up other radiologically impacted sites on the west coast.

According to documents, one of the project managers who worked at Hunters Point, Bill Dougherty, also worked at radiological cleanup site in Washington.

What we want to know from the EPA is: Why did this company and this individual, who oversaw the work at Hunters Point that has been found by the EPA to show signs of fraud, go on to do other, similar work? Does this present a problem, and if so, why not? Are there are reasons to think that the further work done by Tetra Tech and overseen by Mr. Dougherty will be similarly be problematic? In its comments on the Navy's five-year review, the EPA cited great public lack of trust in the Navy's work. Does this help rebuild that trust?

Lastly, I am told that one of the Navy work orders to do soil work at the Parcel G retesting project is going to a company called Upside Radiological Services. One of the partners in that company also worked at the Tetra Tech project that is being redone -- in essence, one of the managers who oversaw the fraudulent project is coming back. Does that look good, does that help the public trust?

Response:
EPA doesn't have additional information on this issue. Questions regarding the Navy's selection and oversight of its contractors at Hunters Point or at other locations are most appropriately addressed by the Navy.

November 14, 2018

Inside EPA, Suzanne Yohannan
I was wondering if Region 9 can comment on a report issued last week (dated Oct. 18) by the Committee to Bridge the Gap. It's the third in a series on Hunters Point, and is titled: Hunters Point Shipyard Cleanup Used Outdated and Grossly Non-Protective Cleanup Standards. See:

[HYPERLINK "http://committeetobridgethegap.org/wp-content/uploads/2018/10/HuntersPtReport3CleanupStandards.pdf"]

It says the Navy used outdated cleanup standards -- both building PRGs and soil PRGs -- at the site, rather than EPA's updated PRG calculators to establish and evaluate cleanup standards. EPA has told the Navy to use the updated versions, but the Navy has not. In addition, the authors of the report ran EPA's PRG and BPRG calculators for the site, finding that they far exceed risk levels deemed acceptable by EPA under CERCLA.

Could you respond to these findings?

Also, given the Navy has not heeded EPA's advice to use updated PRG calculators/ levels, instead using a building guidance document (AEC guidance document) dating back to the 1970s that was based on detection capabilities at the time, and a 27-year old soil PRG, does EPA plan to take any action to compel the Navy to change its calculators and cleanup levels? What recourse does EPA have? Is EPA allowing the military to do this same thing elsewhere?

The report contends that the Navy is violating Superfund law by using outdated calculators. Do you agree?

Response:
Below are responses to your questions. Please attribute to the agency and not a specific individual.

Question: I was wondering if Region 9 can comment on a report issued last week (dated Oct. 18) by the Committee to Bridge the Gap. It's the third in a series on Hunters Point, and is titled: Hunters Point Shipyard Cleanup Used Outdated and Grossly Non-Protective Cleanup Standards. See:
[HYPERLINK "http://committeetobridgethegap.org/wp-content/uploads/2018/10/HuntersPtReport3CleanupStandards.pdf" \t "_blank" \o "http://committeetobridgethegap.org/wp-content/uploads/2018/10/HuntersPtReport3CleanupStandards.pdf"]

It says the Navy used outdated cleanup standards -- both building PRGs and soil PRGs -- at the site, rather than EPA's updated PRG calculators to establish and evaluate cleanup standards. EPA has told the Navy to use the updated versions, but the Navy has not.

EPA Response: The original cleanup standards did consider EPA PRG Calculator risk estimates that were current at that time. As we would do at any Superfund site, EPA has stated that the site testing and cleanup, including retesting of previous radiological work, must meet cleanup standards that are demonstrated to be protective using EPA's current risk evaluation tools. As part of its Five-Year Review, which is standard for any Superfund site that has waste remaining on-site, the Navy is now evaluating existing radiological cleanup standards using the current EPA PRG Calculator. This process requires a thorough, detailed, technical review which the Navy and EPA are currently doing.

Any concerns about cleanup standards or data falsification would not impact the health of current residents in Parcel A or the surrounding community. The areas under question are enclosed under protective covers (such as pavement, clean soil, or building foundations) or inside locked buildings in secured parts of the site outside of Parcel A (the residential area). Independent radiological monitoring of dust, groundwater, ground surfaces, and fence lines have shown that health-based standards are met, and independent third-party contractors routinely conduct in-person observations of current radiological cleanup work. **The public is not at risk while the evaluation and retesting proceeds.**

Question: In addition, the authors of the report ran EPA's PRG and BPRG calculators for the site, finding that they far exceed risk levels deemed acceptable by EPA under CERCLA.

Could you respond to these findings?

EPA Response: The EPA recommends using its Preliminary Remediation Goals (PRG Calculator) online tool to estimate risks under different scenarios. The report used default assumptions in the risk model. The EPA Users Guide stresses the importance of using site-specific parameters in the PRG Calculator, as opposed to default parameters that may not reflect likely exposures and can provide misleading results. When the Navy provides its draft analysis in the next draft version of the Five-Year Review, EPA and other regulatory agencies will provide review and comments regarding the acceptability of the analysis.

Question: Also, given the Navy has not heeded EPA's advice to use updated PRG calculators/ levels, instead using a building guidance document (AEC guidance document) dating back to the 1970s that was based on detection capabilities at the time, and a 27-year old soil PRG, does EPA plan to take any action to compel the Navy to change its calculators and cleanup levels? What recourse does EPA have? Is EPA allowing the military to do this same thing elsewhere?

The report contends that the Navy is violating Superfund law by using outdated calculators. Do you agree?

EPA Response: As stated previously, the Navy is currently evaluating its radiological cleanup standards using the current version of the EPA PRG Calculator. EPA expects that similar evaluations should occur at any Superfund site as part of the standard Five-Year Review process, using site-specific parameters, in accordance with EPA national guidance.

November 2, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
[Previous statement by Jason: This is still very unclear. You're not telling us which site-specific parameters were used and why. So this response isn't germane to our story.]

In addition, this still doesn't address the DAC standard that was being used and whether the EPA considers that standard protective for non-nuclear workers like police and members of the public. There is no mention in the records that we have seen of PRGs being used to evaluate the airborne radioactivity at RSY2, with or without specific exposure parameters.

Why did the EPA allow the Navy to use the DAC standard instead of the PRGs? The air monitoring that was being used couldn't see anything below 10% of DAC, which is far above the PRG limits for the public.

Given that, how can the EPA know that the air concentrations weren't a problem for the public? Is there air data that the EPA reviewed at the time, and calculations that the EPA ran that form the basis for the current assurances the EPA is making about the airborne radioactivity around RSY2? If so, can you provide those?

Also you mention, "EPA has used site-specific parameters in the PRG Calculator..."

We are confused about the timeline here. When did EPA do this calculation? Was this done at the time to verify the safety of using DAC at this site? Was this done after we inquired about it?

And to Jason's point below, what are the site-specific parameters you used and why? And what are the risks you got for specific contaminants? In other words, can you provide us with the actual PRG runs you did with inputs that depart from default, along with detailed explanations of why those decisions were deemed appropriate for this location/the nearby police?

Response:
Hope the responses below help clarify the questions raised – we moved quickly to meet your deadline. We do want to express the importance of using site-specific parameters in the PRG Calculator, as opposed to default parameters that do not reflect likely exposures and can provide misleading results.

Q1. Why did the EPA allow the Navy to use the DAC standard instead of the PRGs? The air monitoring that was being used couldn't see anything below 10% of DAC, which is far above the PRG limits for the public. Given that, how can the EPA know that the air concentrations weren't a problem for the public? Is there air data that the EPA reviewed at the time, and calculations that the EPA ran that form the basis for the current assurances the EPA is making about the airborne radioactivity around RSY2? If so, can you provide those?

A1. The Nuclear Regulatory Commission (NRC) uses the Derived Air Concentration (DAC) as a limit for nuclear facilities in which workers have specialized training and multiple forms of protection to work in an environment with potential radiological hazards. These include, for example, wearing dosimeters (monitors that track radiation dose received by an individual over time).

At the Hunters Point Naval Shipyard, workers doing testing and cleanup for potentially radiologically impacted areas also have specialized training and multiple forms of protection to work in an environment with potentially radiological hazards. 10% of the DAC is 10 times more protective than the NRC standard for those radiological workers. The Navy has stated that no radiological workers have reported monitoring results from dosimeters that have ever exceeded any health-based limits. As we explained in our earlier response, at the Hunters Point Naval Shipyard, using 10% of the DAC as a screening level would be consistent with protective screening levels in an EPA Superfund context for the most common alpha and beta sources.
At Superfund sites, EPA also often uses its Preliminary Remediation Goal (PRG) Calculator as another form of screening evaluation. This is primarily done to select cleanup goals so that future workers and residents will not be exposed to long-term risks that exceed the National Contingency Plan regulation levels of 10^-6 to 10^-4 excess cancer risk after cleanup is complete. EPA does not have guidance specifying whether to use the EPA PRG Calculator or the NRC standards for protection of workers doing short-term cleanup activities. Superfund sites nationwide have used either approach.

Q2. Also, you mention, "EPA has used site-specific parameters in the PRG Calculator..." We are confused about the timeline here. When did EPA do this calculation? Was this done at the time to verify the safety of using DAC at this site? Was this done after we inquired about it?

A2. For the protection of workers doing short-term cleanup activities, EPA does not have guidance that specifies whether to use the EPA PRG Calculator or the NRC standards. Superfund sites nationwide have used either approach. However, after you inquired about it, we did an additional check using the PRG Calculator to see how the results compared (see A-3 below).

Q3. And to Jason's point below, what are the site-specific parameters you used and why? And what are the risks you got for specific contaminants? In other words, can you provide us with the actual PRG runs you did with inputs that depart from default, along with detailed explanations of why those decisions were deemed appropriate for this location/the nearby police?

A3. To be more conservative (i.e., protective) than the 'Indoor Worker' scenario and the scenario with radiologically trained and protected worker, EPA ran an "Outdoor Worker" Air scenario. According to the User's Guide, "This is a long-term receptor exposed during the work day who is a full-time employee working on-site and who spends most of the workday conducting maintenance activities outdoors." For Building 606 police staff who are mostly working indoors, the risk would be less than for an outdoor worker, who might be directly exposed to dust at the location she or he is working.

Outdoor worker scenario: The 2010 *Dust Control Plan* shows 10% of the DAC as the standards for three Radionuclides of Concern (ROCs) Ra-226, Cs-137, Sr-90. These were the most widely used radionuclides at the Hunters Point Naval Shipyard site and been the most commonly found radionuclides during testing and cleanup. Ra-226 comprises over 90% of the ROCs. We ran the EPA PRG Calculator risk estimate for an 'Outdoor Worker' air scenario and assumed the following:

- 4 years – the expected time frame for completing field work for a specific section of the site, under a single contract, with specific associated workers.
- 40 days per year – 6 weeks was often needed to process a single load of soil on an RSY pad. For that single load, scanning and sampling typically took 4 hours. Then before that load could be moved, the process required 3 weeks for radionuclides in soil samples to come into equilibrium. After that, the lab needed to do analysis, which would be sent for Navy technical review and approval. That process usually took a minimum of 6 weeks, but some times more. During a typical year, a single RSY pad might go through this process 8 times. This would mean 4 hours X 8 loads = 32 hours per year. Close to Building 606, possibly up to 10 RSY pads might have been processing soil simultaneously. 32 hours per year per pad X 10 pads = 320 hours per year. At 8 hours per day, the total days per year would be 320 hours divided by 8 hours = 40 days per year.
- 0.12 hours per day – Dust is generated when the wind blows over 15 miles/hr. Wind data collected over 70 years nearby shows that the wind blows above 13 miles/hour approximately 30% of the time. 8 hours X 30% = 2.4 hours per day. Dust control plans require a standard of "no visible dust" and various measures, such as the requirement to stop work at windspeeds above 25 mph winds and wetting of soil. Dust control measures have been demonstrated to significantly reduce dust. In addition, the wind blows primarily across RSY 2 in the opposite direction from Building 606. Due to these considerations, we estimate actual exposure to dust to occur 5% of the work day when the wind speed exceeds 15 miles per hour. 2.4 hours per day X 5% = .12 hours/day exposure.

These site-specific parameters lead to a risk estimate of 3.2 X 10^-5 for Cs-137, 8.5 X 10^-5 for Ra-226, and 4.2 X 10^-6 for Sr-90. These are within the National Contingency Plan (NCP) risk range of 10^-6 to 10^-4 used at Superfund sites.

On October 23, you provided a snapshot of air data with alpha and beta results, which appear to show 8-hour accumulation. The difference between the monitoring results upwind (baseline) and the downwind represents contamination that could have blown from the worksite. We took the highest difference between the downwind and upwind monitoring results and used the EPA PRG Calculator to estimate a risk of 2 X 10^-7 for alpha and beta combined. We assumed 100% alpha activity came from Ra-226 (which is a more protective assumption). For beta activity, we assumed that half came from Sr-90 and half from Cs-137. Again, this calculated risk is within the NCP risk range.

November 1, 2018
Curbed SF, Chris Roberts
Question:
Just one quick question for EPA today regarding a follow-up story we're doing about the whistleblower complaints unsealed in federal court last week. As you know, the Justice Department is joining in on these suits. The complaints contain allegations that Tetra Tech's work at Alameda NAS and Treasure Island may also be questionable.
Is this something that EPA has looked into? Does EPA believe that Tetra Tech Inc's work, and the work of its subsidiaries, at Treasure Island and/or Alameda NAS can be trusted? If so, why? And if not, what actions is EPA taking to address it?

Response:
EPA has not received or reviewed any information about allegations that Tetra Tech EC Inc work at Alameda Naval Air Station (NAS) may be questionable. As with Hunters Point, the Navy is the lead agency responsible for cleanup of the Alameda NAS Superfund site. EPA and its state regulatory partners (including the California Department of Toxic Substances Control, the California Department of Public Health, and the San Francisco Bay Regional Water Quality Control Board), oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup process at Alameda NAS protects human health and the environment.
The Navy reports that they have looked closely at radiological data at Alameda NAS and have found no irregularities. The Navy also indicates that many different contractors were used and produced consistent data. In terms of background, historic site uses at Alameda NAS were quite different than Hunters Point. Alameda NAS did not have a Naval Radiological Defense Laboratory or conduct decontamination of ships from weapons testing.

Treasure Island is not on the National Priorities List (NPL); therefore, it is overseen by the State, not EPA. Please contact the Navy or the CA Department of Toxic Substances Control (DTSC).

Media contacts:
DTSC: Abbott Dutton, Media Relations Manager, [HYPERLINK "mailto:Abbott.Dutton@dtsc.ca.gov"]
Navy: Bill Franklin, [HYPERLINK "mailto:William.d.franklin@navy.mil"], [HYPERLINK "tel:619-524-5433"]

November 1, 2018

Courthouse News, Nicholas Iovino

Follow up to previous response:

Are there no documents that identify what types of testing should be done for specific environmental conditions?

How does the government determine what kind of testing should be done to verify a site is cleaned up if there are no guidelines for determining which tests and procedures should be used?

Response:

Yes, for example, the Records of Decisions (RODs)mentioned in the previous email identify what types of testing should be done for specific environmental conditions. For example, the [HYPERLINK "https://www.navfac.navy.mil/niris/SOUTHWEST/HUNTERS_POINT_NS/N00217_001536.PDF"] discusses these in Table 6, and Section 2.9 on pages -pp. 41-47.

EPA does have guidelines, and they are tailored to site-specific conditions. See this website for examples of guidelines that are sometimes used, depending on the circumstances at a particular site: [HYPERLINK "https://www.epa.gov/superfund/radiation-superfund-sites"]

October 30, 2018

Courthouse News, Nicholas Iovino

Can you please provide me with EPA documents that outline the proper standards and procedures for clearing a site suspected of radioactive contamination, such as the clean-up projects for Treasure Island and Hunters Point in San Francisco?

Response:

Standards and procedures are specific to sites or portions of sites. For example, Hunters Point is divided into different parcels that each have Records of Decisions (RODs). The Navy is the lead on the cleanup and is responsible for maintaining the full Administrative Record.

Here is the public contact for the Navy:
Derek J. Robinson, PE
BRAC Environmental Coordinator
Navy BRAC PMO West
Desk Phone: 619-524-6026
[HYPERLINK "mailto:derek.j.robinson1@navy.mil"]

The Navy's press contact is: Bill Franklin, [HYPERLINK "mailto:William.d.franklin@navy.mil"], 619-524-5433.

Here is the Navy's website where you can look up the RODs and other documents: [HYPERLINK "https://www.navfac.navy.mil/products_and_services/ev/products_and_services/env_restoration/administrative_records.html?fromDate=DD-MON-YYYY&toDate=DD-MON-YYYY&p_instln_id=HUNTERS_POINT_NS&basic=&title=&sites=&author=&keywords"]=

In addition, the State Department of Toxic Substances Control (DTSC) EnviroStor website has the RODs and other documents. Here is the link: [HYPERLINK "https://www.envirostor.dtsc.ca.gov/public/search.asp?CMD=search&city=San+Francisco&zip=&county=&case_number=&business_name=&FEDERAL_SUPERFUND=True"]

October 30, 2018
SF Examiner, Laura Waxmann
Following up quickly to a report released today by a former UC Santa Cruz research team that you may be aware of - the report alleges that the Navy in its remediation at the Hunters Point Shipyard used outdated measurement standards put in place by the now defunct Atomic Energy Commission.

I know that the EPA has recently called on the Navy to adhere to current standards over its plan to retest Parcel G.

Does the EPA have comment on the report's allegations (attached)?
The reports authors also contend that they attempted to schedule a meeting with EPA officials back in 2016 to discuss the reports findings, but that this effort was unsuccessful.
How long was the EPA aware of the Navy's practice of using outdated standards? What action has been taken to attempt to force the Navy to follow the required standards?
I am writing about this report today - it would be great to get a response by end of day. Thank you!

Response:
EPA has not reviewed the report published by the Committee to Bridge the Gap and will not be able to comment on it at this time.

October 30, 2018
NBC Bay Area, Liz Wagner

We understand the EPA has been recommending that the Navy use current versions of the EPA's Preliminary Remediation Goals Calculator for soil and buildings at the Hunters Point Shipyard – and that the Navy has refused to do so. (Please see excerpts of EPA documents below). We understand that instead, the Navy has continues to use outdated cleanup standards that some are alleging are not protective of human health.

- Can you confirm that the Navy is using outdated cleanup standards?
- Can you confirm the EPA has recommended that the Navy use current standards?
- Why is the EPA recommending that the Navy use current standards?
- What is the EPA's reaction to the Navy's use of outdated standards?
- What action can the EPA take to force the Navy to use the most current standards?
- Is the public's health at risk by the use of cleanup standards that are weaker than what the EPA requires?

Again, we're on a deadline of 4 p.m. and would appreciate a response asap.

Response:
We're unable to meet your 4pm deadline for additional comment, but you are welcome to cite our letter.

October 30, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
There is a report out this morning from the Committee to Bridge the Gap about the cleanup standards

that have been used at the Hunters Point Naval Shipyard (see attached). We would like to get the EPA's response to this and allegations raised in the report, including that the EPA allowed the Navy to move forward with obsolete cleanup standards for years that could put the public at risk.

We may follow up with more specific questions, but just wanted to get this in front of you ASAP, as we are planning on writing about this for today and it may be up online as early as this afternoon.

Response:
EPA has not reviewed the report published by the Committee to Bridge the Gap and will not be able to comment on it at this time.

October 30, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
Follow up to previous response:
Hi there, can you please explain what you mean by exposure parameters? What assumptions are you making? And what do you mean by protective? The measurements taken were tens of thousands of times above PRGs for certain isotopes (air/outdoor worker). How is that still protective? Wouldn't the cancer risk be significantly higher?

Response:
EPA has used site-specific parameters in the PRG Calculator, as opposed to default parameters that do not reflect likely exposures, and compared output to the risk range of 10^-6 to 10^-4 excess cancer risk. At RSY 2, these parameters are influenced by mitigation measures, field schedules, climate, and other conditions.

In addition, EPA has asked the Navy to evaluate radiological standards overall to ensure protectiveness under current site conditions, scientific understanding, and policy requirements.

October 25, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
Follow up to previous response:
Just to be clear, when you say "protective screening levels in an EPA Superfund context" do you mean levels the EPA deems protective for Superfund workers who, like nuclear power industry workers, are knowingly working around radiological materials? Or does the EPA also consider these levels protective for members of the public?

If the latter, aren't these levels far above EPA's PRGs for air for the public?

Response:
Given the specific exposure parameters at RSY 2, the levels would protect an outdoor worker located at the cleanup site.

October 24, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
We need to confirm one more thing with you. The snapshot of air sampling data that we did receive from RSY2 was presented as <10% DAC for Alpha and Beta. Just wanted to confirm with you that

Derived Air Concentration is a safety limit used for workers in the nuclear power industry and would have been appropriately applied to workers at RSY2, who were also knowingly working with radiological materials.

Response:
Yes, the Derived Air Concentration (DAC) is a safety limit used for workers in the nuclear power industry. At the Hunters Point Naval Shipyard, using 10% of the DAC as a screening level would be consistent with protective screening levels in an EPA Superfund context for the most common alpha and beta sources.

October 19, 2018
Curbed SF, Chris Roberts
Follow up to previous response:
Thanks, this is helpful! I think we are going live this morning. It does indeed appear that the EPA has criticized the Navy recently, but maybe if we can work on this: Does EPA believe that the entirety of the base needs to be scanned for all of the radionuclides mentioned in the report, or does EPA still accept the Navy's contention that most of the base was not contaminated with low-level radioactive waste?

Response:
EPA's focus right now is on working with the Navy and other regulatory agencies to create a sampling approach and plan for Parcel G, which includes a scan of all accessible areas of Parcel G. As we move forward, EPA, along with the other regulatory agencies, will assess proposed retesting at other parcels.

October 18, 2018
Curbed SF, Chris Roberts
I'm a reporter with Curbed SF. I hope this message finds you well.
I apologize in advance for the short notice and tight deadline, but researchers formerly with UC Santa Cruz today released a pair of reports criticizing the Navy's assessment and cleanup of the radioactivity at the former Navy shipyard at Hunters Point, which is an EPA superfund site.
They can be found here: [HYPERLINK "http://committeetobridgethegap.org" \t "_blank"].
The main takeaways are that the Navy spread far more contamination over Hunters Point than previously publicly acknowledged and that the Navy did not scan enough of the shipyard for the appropriate radionuclides of concern.
We need to see if we can include comment from the EPA on these reports. Do we think that areas including Parcel A that have been declared clean need to be rescanned? Should the entire base be redone? Can it still be cleaned up to safe standards?
(I know the EPA has recently criticized the Navy's proposed remediation of Parcel G as well; if there are any letters or memos exchanged between the EPA and Navy over the past month on the shipyard, can you also provide a copy?)
Unfortunately my deadline on this is almost immediate. But if the EPA can provide us with information, we can always add to our story after it is published online.

Response:
Hi Chris,
Given your tight deadline, this is all I have available right now:

- **Parcel A:** Since July, the California Department of Public Health (CDPH) has been doing a radiological scan of Parcel A, where residents already live. Over 95% of Parcel A has been rescanned by CDPH. Please visit CDPH's website for the latest [HYPERLINK "https://www.cdph.ca.gov/Programs/CEH/DRSEM/CDPH%20Document%20Library/RHB/Environment/Hunters%20Point%20Parcel%20A1%20scan-update-Oct-1-2018.pdf" \t "_blank"] and additional information: [HYPERLINK "https://www.cdph.ca.gov/Programs/CEH/DRSEM/Pages/RHB-Environment/Hunters-Point-Naval-Shipyard-Parcel-A-1-Survey.aspx" \t "_blank"]

- **Parcel G:** The Navy has agreed to complete a health and safety scan of all accessible areas of Parcels G, D-2, UC-1, and UC-2. Please visit the Navy's website for their full October 3rd statement: [HYPERLINK "https://www.bracpmo.navy.mil/brac_bases/california/former_shipyard_hunters_point/timely_topics.html" \t "_blank"]

- **EPA correspondence with the Navy:** You can find all site documents on our [HYPERLINK "https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.docdata&id=0902722" \t "_blank"]. Here's a link to EPA's review of the Draft Parcel G Removal Site Evaluation, Sampling and Analysis Plan (SAP), from September 24, 2018: [HYPERLINK "https://semspub.epa.gov/work/09/100010673.pdf" \t "_blank"]

October 4, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
We are continuing our reporting of Building 606 at the shipyard. This is the story we did earlier this year:

[HYPERLINK "https://www.sfchronicle.com/news/article/Amid-a-toxic-landscape-SF-found-a-home-for-its-13101114.php"]

We now understand that in 2007, Tetra Tech and the Navy began to surround Building 606 with Radiological Screening Yards and the soil pads associated with those yards. See attached image (from a Navy and Tetra Tech project document). Tetra Tech was also doing radiological remediation work in close proximity to 606. In May 2007, a city industrial hygienist wrote in an email, "Building 606 will also be adjacent to some of the actual storm sewer remediation activities since the storm drains designated for removal are located on the street in front of the buildings main entrance. At some point, building 606 will be surrounded by the remediation activity on three sides of the building."

City employees working at 606 at the time expressed concerns about the potential health and safety implications for people at the building. And the city industrial hygienist asked explicitly in her email, "Should the Police continue to operate Building 606 during the activity? Do we believe that there is a potential for Police to be exposed to the radiological or other chemical contamination in the excavated soils?"

The police did continue to operate at Building 606, and there are still about 40 city employees working there today. Our questions to the EPA:

-- Why did the EPA continue to allow the lease of Building 606 in 2007 when the city hygienist was raising these questions?

-- Why did the EPA consider it acceptable that "building 606 will be surrounded by the remediation activity on three sides of the building" while people were still working there every day?

-- The city decided to keep its employees at Building 606 after getting a promise from Tetra Tech that the company would provide radiation air sample data from the RSY pads to the city. Records show that Tetra Tech did provide some snapshots of radiation air sample data to the city, but did not provide the data on a regular basis. The city asked for weekly updates and did not receive them. The Navy also declined to provide regular or weekly radiation air sample data to the city. Was any radiation air sample data from the RSY pads surrounding Building 606 ever provided to the EPA? Did EPA ask for it or review it?

-- City emails show that city officials had a difficult time obtaining radiation air sample data from Tetra Tech. Was the EPA aware of this at the time? Did the EPA get involved in any way?

-- Does the EPA have air monitoring records from the RSYs starting in 2007 showing that there was no danger to the people at 606? RSY2 was next to Building 606 on the east, RSY3 was to the south, and RSY4 to the northwest.

-- Did the EPA send a representative to the 11/28/2007 meeting at Building 606 where SFDPH gave a "Safety and Health Presentation" to the building occupants? If so, who attended? Did the EPA present, if so, can you provide that presentation?

-- Given the scope of the data-faking allegations against Tetra Tech — allegations that have been confirmed in multiple investigations, as the EPA has noted — does EPA have confidence in the accuracy of Tetra Tech's radiation air sample data taken at the RSY pads near Building 606? Or is this data now in question?

-- If the radiation air sample data is in question, does the EPA have concerns that people working at Building 606 were put at risk because of their proximity to these pads and this radiological remediation work?

Given our deadline, we need answers to these question by the end of the day on Friday. Let us know if you have any questions and thank you for your time.

Response:
The Navy is the lead on the cleanup at this site and is therefore responsible for maintaining the full Administrative Record, including air monitoring records. Please contact the Navy for data from the time period you are requesting.

During 2007 and subsequently, in any cleanup work done in areas that are potentially radiologically impacted, the Navy contractors protected workers and the public from potential exposure to contamination through a variety of practices. For example, they installed air monitors upwind and downwind of the work area. Water was used to minimize dust production at excavation sites and on streets. Radiological workers wore dosimeters, which are badges that measure how much exposure they have to radiation. Certified radiological experts scanned the tires of trucks and the hands and feet of people leaving a work area. All these practices would have protected workers at Building 606 from radiological contamination from any cleanup work that occurred nearby.

In more recent years, the State Department of Toxic Substances Control industrial hygienists and the Bay Area Air Quality Management District staff have conducted inspections for dust. The Navy's third-

party independent contractor oversees radiological work onsite. The Navy routinely sends regulators air monitoring reports from Parcel E-2 work. These reports are available on DTSC's EnviroStor website.

October 3, 2018
The Verge, Rachel Becker

Q1. I understand that the EPA told the Navy in 2017 that 90 percent of the work TetraTech did in Parcel B was suspect, and 97 percent in Parcel G was not reliable, as well. Is my interpretation of those numbers, from this letter correct?
[HYPERLINK "https://www.peer.org/assets/docs/epa/4_9_18_EPA_comment_summary.pdf?eType=EmailBlastContent&eId=71b47782-14d8-4693-82ec-e9c827dd7ce4" \t "_blank"]

> **Response:** EPA, DTSC, and CDPH found signs of potential falsification, data manipulation, and/or data quality concerns that call into question the reliability of soil data in 90% of the total suspect soil survey units in parcel B and 97% of suspect survey units in Parcel G. Please see this link to EPA's findings from our independent review of Parcels B and G soil testing data: [HYPERLINK "https://semspub.epa.gov/work/09/100006302.pdf"]

Q2. Is that the latest assessment? Have those numbers been updated? For example, have other parcels been assessed by the EPA?

> **Response:** Here is a link to EPA's evaluation of soil testing data from Tetra Tech EC Inc. in Parcels D-2, UC-1, UC-2, and UC-3: [HYPERLINK "https://semspub.epa.gov/work/09/100006302.pdf"]

Q3. CDPH says that EPA conducted "conducted a radiological survey of Parcel A in 2002." ([HYPERLINK "https://www.cdph.ca.gov/Programs/CEH/DRSEM/CDPH%20Document%20Library/RHB/Environment/Final%20Hunters%20Point%20-%20Parcel%20A1%20-%20Summary.pdf"]). **Can you tell me more about that survey? How was it conducted, and what were the results? Why, then, are folks asking for Parcel A to be checked again — and how did the scan miss material like that radium-painted dock marker reportedly found at parcel A?** ([HYPERLINK "https://www.sfchronicle.com/bayarea/article/Radioactive-object-found-near-homes-at-Hunters-13228476.php"])

> **Response:** In 2002, EPA conducted a radiological scanner van survey of Parcel A and navigable roads on other parts of the shipyard. All of the anomalies detected during the scan were attributable to natural occurring sources at levels consistent with what would normally be found in the environment. The radiological scanner van survey gave information related to certain types of potential radiological exposures closer to the surface; it did not address all types of radiation potentially present or deeper locations of contamination. The scanner van survey is also subject to other limitations listed in the attached report, e.g. only limited locations were accessible, asphalt would have shielded some gamma radiation, etc.
>
> The deck marker was found at the bottom of a hillside, in an unpaved area not accessible to a vehicle, near the boundary of Parcel A. This area had not been previously scanned by EPA. In

addition, after the Navy transferred Parcel A to the City/County of San Francisco, considerable earthmoving changed the surface of the property. The areas that EPA originally scanned are no longer the surfaces where current residents live.

Q4. Why are the EPA's numbers re: unreliable work so much larger than the Navy's? Is the shipyard safe for the community living in Parcel A, or the rest of the Bayview Hunters Point community living next door?

Response: In regards to the discrepancy in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results.

Based on the work done and history of the site, we do not believe anyone living or working at Hunters Point faces any health risk. For the entire site, over the past decades, EPA and the state have been monitoring radiological conditions on an ongoing basis to ensure the safety of the surrounding community. For example, we have been reviewing radiological data collected by a variety of contractors from air monitors (both upwind and downwind), groundwater samples, and fence line scans. Environmental regulators have also done independent radiological testing in some locations, such as hand scans, collecting swipe samples, and analyzing duplicate soil samples in independent laboratories.

On Parcel A, the State of California Department of Public Health (CDPH) has almost completed new gamma scans in the location where current residents live and has thus far not found harmful levels of radiation that could expose residents. CDPH did find one Navy ship's deck marker. Due to its location and level of radiation, the object was not causing harm to residents or workers.

The concerns we have about Tetra Tech EC Inc. would not impact the health of current residents in Parcel A or the surrounding community. The areas under question are enclosed under protective covers or inside locked buildings in secured parts of the site. We believe that these measures, routine monitoring described above, and other protections, including dust controls, are protecting the community as our investigation and clean-up activities proceed.

Q5. What are the EPA's concerns about the Navy's plans to retest the site, and is the EPA satisfied the Navy is addressing those concerns?

Response: Here are links to EPA's comments on Navy drafts of Work Plans to retest the site on March 26, 2018, ([HYPERLINK "https://semspub.epa.gov/work/09/100009179.pdf"]) and August 14, 2018, ([HYPERLINK "https://semspub.epa.gov/work/09/100009276.pdf"]). The Navy expects to release a revised Work Plan for Parcel G in October 2018. EPA will review that draft to evaluate the Navy's responses to our comments.

Follow-up Q. Is the shipyard STILL a superfund site? (sent on Oct. 4)

Response: The Hunters Point Naval Shipyard comprises over a dozen different parcels. Most of those parcels remain on the Superfund National Priorities List. Parcel A was removed from this list in 1999 and was transferred to the City of San Francisco for development in 2004.

September 24, 2018
Inside EPA, Suzanne Yohannan
Responding to question (9/20/18): I was wondering if EPA Region 9 submitted its comments yet to the Navy on its five-year review for the Hunters Point Shipyard cleanup. If it has, could I obtain a copy of EPA's comments?

Response:
Hi Suzanne,
Please see attached.
Thank you.

September 20, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
Question:
We're working on a follow-up story about the radium deck marker on Parcel A and questions/concerns about what it means. We just want to know if EPA has a position on what should happen next with the walkover survey of Parcel A. Due to the finding of the deck marker, should the CDPH radiation survey be changed or expanded, to make it more thorough? And does EPA think there might be other contamination on the parcel -- radiological, chemical, or biological -- that has been missed in prior searches?

Response:
EPA is working with its regulatory partners, the State of California Department of Public Health and Department of Toxic Substances Control, and the Navy to determine how the site cleanup needs to be adjusted. EPA supports the new actions already in progress to complete scanning portions of Parcel A that are currently under construction starting in the next few weeks, which is a faster timeline than originally planned. To address uncertainty, EPA is working hard with other regulators and the Navy to explore all options as soon as possible to make the radiological testing process more thorough at the Hunters Point site.

EPA remains committed to ensuring that the Bayview-Hunters Point community is protected from harmful exposure to radiation and that the Hunters Point Naval Shipyard Superfund site can be safely used for work, recreation, and residential purposes.

September 20, 2018
Inside EPA, Suzanne Yohannan
Question: I was wondering if EPA Region 9 submitted its comments yet to the Navy on its five-year review for the Hunters Point Shipyard cleanup. If it has, could I obtain a copy of EPA's comments?

Response:
Hi Suzanne,
We anticipate submitting our comments on the Navy's five-year review for the Hunters Point Shipyard cleanup by the end of this week. I can share a copy with you after that.

September 14, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
Question:
Apologies for the late email, but we have just jumped on a breaking shipyard-related story about the discovery of a radium deck marker in the Parcel A rescanning. Hoping to get a comment from you in light of previous assurances the agency has made about the this part of the shipyard being free of contamination.

In light of this find, does the agency think that Parcel A should be re-checked more thoroughly? If not, why not? Should residents be concerned that this object was nearby and never flagged before? If not, why not?

We are on deadline; this story is scheduled to run in the paper tomorrow.

Response:
The Navy is the lead agency on the cleanup at the Hunters Point Naval Shipyard Superfund site and the California Department of Public Health is the lead agency for radiation scanning on Parcel A at The Shipyard development. EPA, along with its state regulatory agency partners, oversees and enforces Navy compliance with the Superfund law and other requirements to ensure the cleanup process – including Parcel A scanning – protects human health and the environment.

During the Parcel A scanning process, CDPH discovered one Navy-related object, a deck marker (1.5 inches in diameter), that contains radiological material. EPA oversaw the immediate removal of the object. Due to its location and level of radiation, the object was not causing harm to residents or workers. The cleanup process for HPNS requires Navy-related radiological material be cleaned up upon discovery (as opposed to other types of radiological material, such as naturally occurring radiation in granite).

EPA is working with the Navy to determine if and how the site cleanup needs to be adjusted. EPA supports completing scanning at Parcel A on a faster timeline than originally planned and making the scanning process more thorough at the Hunters Point site.

EPA remains committed to ensuring that the Bayview-Hunters Point community is protected from exposure to radiation and that the Hunters Point Naval Shipyard Superfund site can be safely used for work, recreation, and residential purposes.

Follow-up question:
Quick follow up, can we get the actual counts per minute and dose rate in millirems/hr from the scan and from the object after it was dug up?

Response:
Please contact the Navy and CDPH for that information. Here are some contacts for you:

Navy – Bill Franklin, [HYPERLINK "mailto:William.d.franklin@navy.mil" \t "_blank"], [HYPERLINK "tel:(619)%20524-5433" \t "_blank"]

CDPH – Dale Schornack, [HYPERLINK "mailto:Dale.Schornack@cdph.ca.gov" \t "_blank"], [HYPERLINK "tel:(916)%20558-1738" \t "_blank"]

Follow-up question:
Michele, EPA's statement to us last night said that EPA "oversaw" the removal of this object. EPA clearly had a lead role here. Can you explain why you are sending us to other agencies and can't provide the information?

Response:
EPA was onsite for the removal of the deck marker and oversaw the process. EPA did not take direct radiation measurements of the object; that was handled by the Navy and CDPH.

By the way, I am copying my colleague, Soledad Calvino, on this response, as she will be taking over the NorCal beat for EPA Region 9 starting next week. For future requests (after today), please contact her directly.

September 12, 2018
Inside EPA, Suzanne Yohannan
Question: I was wondering if you could tell me whether EPA submitted comments to the Navy on its five-year review for the Hunters Point Shipyard cleanup. If so, could I obtain a copy of the comments?

Response: We anticipate submitting our comments on the Navy's five-year review for the Hunters Point Shipyard cleanup within the next week. We can share a copy with you at that time.

August 16, 2018
SF Examiner, Laura Waxmann
Questions:
Hope all is well with you. I'm working on a story about the Parcel G testing plan at the Hunters Point Shipyard, and would like to arrange a time for a phone interview to talk about the Navy's testing plan and process by next Wednesday (Aug. 11) at the latest.

Here are a few preliminary questions regarding the Parcel G work plan:

Has the US EPA fully reviewed the Parcel G work plan and if so, what improvements are needed, if any?

Is it standard for the EPA comment period on plans like these to occur at the same time as the public's?

What led to the EPA's independent review of Parcels G and D that found data inaccuracies of up to 97 percent in Tetra Tech's work last last year? What flaws were discovered?

What previous assessment/testing has the U.S. EPA conducted at Parcel G?

What authority does the EPA have over the Navy to assure that the procedures are followed in a way that doesn't lead to more retesting? Does the EPA feel that public trust in that process needs to be restored and, if so, how?

Community members have expressed that they want different people to oversee Hunters Point from now on. Has anyone been reassigned in the EPA, and does the EPA have any authority to see that

regulators at other involved agencies step aside?

Responses:
Q1: Has the US EPA fully reviewed the Parcel G work plan and if so, what improvements are needed, if any?

A1: Yes, EPA evaluated the Navy's Parcel G work plan based on our independent review of Parcel G soil sample data. EPA's August comments to the Navy reinforce previous comments recommending a scientifically based strategy to ensure protectiveness of the property for future use. EPA's comments, which we sent to the Navy on August 14, 2018, can be found here: [HYPERLINK "https://semspub.epa.gov/src/document/09/100009276"]

Q2: Is it standard for the EPA comment period on plans like these to occur at the same time as the public's?

While the public is always welcome to comment on any Navy document related to site cleanup, it is not standard to have a formal public comment period for a Superfund site testing work plan. Due to the highly unusual and serious situation caused by data falsification, as well as a high degree of public interest in the topic, the Navy agreed to incorporate a formal public comment period into the review process.

In cases of a formal public comment period, it is typical for EPA and other regulatory agencies to submit comments on a draft document before it is circulated for public comment. This allows the lead agency and regulatory agencies to resolve any issues identified initially prior to presenting the draft document to the public. All agencies would then consider public comments before finalizing the document. However, in the interests of transparency and expediency, the Navy chose to have the comment periods occur simultaneously in this case.

Q3: What led to the EPA's independent review of Parcels G and D that found data inaccuracies of up to 97 percent in Tetra Tech's work last last year? What flaws were discovered?

EPA conducted an independent review of soil sample data from several parcels as part of our assessment of the impacts of Tetra Tech EC Inc.'s alleged failures to follow the cleanup work plan at Hunters Point Naval Shipyard.

EPA's assessment of the data was broader than the Navy's, including looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results.

You can find EPA's report of our findings here: [HYPERLINK "https://semspub.epa.gov/work/09/100006302.pdf"]

Q4: What previous assessment/testing has the U.S. EPA conducted at Parcel G?

The Navy is the lead on cleanup at Parcel G. EPA, in its oversight role, conducts site visits and reviews documents related to Navy plans, testing, cleanup work, reports, and other Navy site work. In addition, in some areas of Parcel G, an EPA health physicist has conducted independent scans by hand, and if needed, the Navy conducted more cleanup.

Q5: What authority does the EPA have over the Navy to assure that the procedures are followed in a way that doesn't lead to more retesting? Does the EPA feel that public trust in that process needs to be restored and, if so, how?

The Navy is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard. EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment.

As for retesting of Parcel G, EPA and state regulating agencies will be closely overseeing this process and taking split samples for independent analysis.

Q6: Community members have expressed that they want different people to oversee Hunters Point from now on. Has anyone been reassigned in the EPA, and does the EPA have any authority to see that regulators at other involved agencies step aside?

In response to this serious issue, EPA has assembled a team of national experts —in radiation, statistics, geology and other areas—from throughout the agency, and for the past three years they have made the Hunters Point Naval Shipyard cleanup a top priority. As additional areas of expertise are needed, they are brought in through agency or contract staff.

EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment.

July 31, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
Questions:
We wanted to follow up with you on Rep. Nancy Pelosi's request to have the EPA's inspector general look into the cleanup of the former hunters point naval shipyard and whether the EPA properly oversaw the Navy and Tetra Tech and properly provided information to the city about possible problems and hazards. Does the EPA have a response to some of the questions Pelosi has raised in asking for this review?

Response:
Please see below for a statement that you can attribute to an EPA Region 9 spokeswoman.

"We believe an Office of Inspector General audit will provide the public additional confidence in EPA's oversight of the Navy's cleanup at Hunters Point Naval Shipyard."

July 25, 2018
CurbedSF, Chris Roberts
Questions:
OCII says that there were "no CERCLA actions required... for storm and sewer lines" that remained on

Parcel A-1. I can't get a straight answer out of them if this means that all storm and sewer lines were so un-impacted, or just some, or what. Either way, seems EPA would be party to any plan to keep the storm and sewer lines there or to have them removed, as was done at other parcels. If EPA released the land with the Navy-era storm and sewer lines, can we find out the basis for this choice?

Response:
The Navy conducted a Historical Radiological Assessment (HRA) in 2004, as well as multiple investigations, to identify potentially radiologically-impacted areas of Hunters Point Naval Shipyard for further follow-up. For Parcel A, the only potentially radiologically-impacted area that could have entered the storm drain or sewer lines was Building 322. This building only had radiological uses prior to its 1959 relocation from then-Parcel D to Parcel A, following a clearance survey by the Navy. After its relocation to Parcel A, Building 322 was used as a North Gate Pass Office and the HRA did not identify any radiological use of the building while it was located on Parcel A. This building was demolished and removed in 2004. Following the removal, an EPA health physicist conducted independent hand scans of the area using two types of scanners to confirm that the former building site was clean. Therefore, no CERCLA action was required related to storm drain or sewer lines before transfer of Parcel A.

By contrast, in other parts of Hunters Point Naval Shipyard that are downstream of Parcel A, the HRA identified potentially radiologically-impacted areas that could have resulted in contamination entering storm drain or sewer lines. Therefore, additional investigation and removal was required under CERCLA for those other locations.

July 25, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
Questions:
Hi Michele. Thanks. Just a quick follow-up to make sure I understand one of your answers here.

How is EPA getting that there was only one sample above release criteria in Tetra Tech's soil samples from the 503 soil? In the 503 Final Status Survey we see five samples above release criteria, from Survey Unit 24. And 32 cubic yards Pof soil were disposed as hazardous waste. Quoting from the report:

"One soil sample (Sample Point 11) collected from Survey Unit 24 exceeded the release criterion for 137Cs at **0.1218 pCi/g**....The results from one soil sample, Sample Point 42, exceeded the release criterion for 137Cs at **0.1474 pCi/g**... A third set of systematic soil samples was collected in Survey Unit 24 following the remediation activities and submitted to the on-site laboratory for analysis. The analytical results identified 137Cs contamination in three samples: Sample Points 62 (**0.2036 pCi/g**), 66 (**0.1652 pCi/g**), and 69 (**0.1134 pCi/g**). Characterization samples were collected in Survey Unit 24 to bound Sample Points 62, 66, and 69 with clean samples."

There were also multiple samples in trench units around the building with elevated levels. So how are you getting 1 sample out of 700? And should the elevated samples from the trench units around the building also have been included in the 2016 fact sheet, or did EPA not consider that relevant?

Response:
Our statement that "one out of approximately 700 earlier systematic samples did show slightly elevated concentrations" referenced the systematic samples of soil that had been previously removed from

under Building 503. That excavation -- and sampling process – occurred as part of the creation of the crawlspace under Building 606.

The Navy first divided the soil to be tested into 35 "survey units". Each survey unit was then divided into a grid of 20 locations of even size and spacing. The Navy then collected one "systematic" sample within each of the 20 grid locations within each of the 35 survey units, which added up to a total of 700 initial systematic samples. Of those 700 initial systematic samples, only one (Survey Unit 24: Sample Point 11) exceeded the release criterion for Cs-137.

When Survey Unit 24: Sample Point 11 exceeded the release criterion, the Navy then took additional characterization samples surrounding that sample point to define the extent of potential contamination. The area was excavated and the process of taking systematic samples was repeated, with additional excavations conducted as needed, until systematic samples no longer showed exceedances. The final set of samples taken, which all tested as within the release criteria, were called "final systematic" samples.

Survey Unit 24: Sample Points 42, 62, 66, and 69 were from the second and third set of systematic samples related to the original grid location where Survey Unit 24: Sample Point 11, the initial systematic sample, first triggered the need for excavation. Therefore EPA had counted the additional four samples that you listed (Survey Unit 24: Sample Points 42, 62, 66, and 69) as being associated with Sample Point 11.

Even though the 32 cubic yards of material that was disposed of was characterized as hazardous waste, it was actually made up of both the small number of sample points that were above the release criterion and larger amounts of non-contaminated soil that was removed as part of the excavation process.

Because the trench units around Building 606 were not under the building, any contamination found in them would not have had as direct an impact on occupants of Building 606. In addition, around Building 606, the new parking lot and streets provide shielding that protect pedestrians from any potential radiological contamination. As such, information on the trench units was not included in the 2016 fact sheet.

July 23, 2018
KALW, Wendy Holcombe
Questions:
Hi Michele - Circling back on the show on the Bayview Hunters Point Shipyard clean up and development this Monday 7/23/18 from 7-8pm. I would love to get a voice on the panel that represents that government's perspective. Would there be someone from the EPA who could speak to this? John Chesnutt or Enrique Manzanilla? Participation could be by phone. I am really trying not to have a one-sided panel so hope something could work out.

Response:

Thank you for inviting EPA to take part in your panel discussion tonight. I'm afraid we will not be able to grant your interview request at this time, but we did want to offer the following statement:

The U.S. Environmental Protection Agency remains committed to ensuring that the Bayview-Hunters Point community is protected from exposure to radiation and that the Hunters Point Naval Shipyard site can be used for work, recreation, and residential purposes.

The Navy is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard. EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at Hunters Point Naval Shipyard protects human health and the environment.

EPA is investigating the impacts of Navy contractor Tetra Tech EC Inc.'s failure to follow the cleanup work plan at Hunters Point Naval Shipyard. Our focus is on ensuring both that no current workers or residents are exposed to hazardous materials and that future residents and workers are protected. We believe that current procedures and protocols will protect current workers and residents, and we are working with the Navy and the state of California to ensure that any radiological contamination that may remain on-site is cleaned up to the standards set in the cleanup decision documents. EPA will not approve any further transfers or new development without ensuring public health and safety.

July 20, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
Questions/Responses:

Question 1: Is EPA going to answer our question about the October 2016 fact sheet on Building 606? The fact sheet reads, "The Navy scanned soil from beneath Building 606 and found no elevated radiation levels." That's inaccurate, according to the Building 503 final status survey. It appears to us that the EPA misstated the facts here, to the public, and that's what we are reporting. We thought it was a fair question.

Answer: We reviewed the final systematic sample analytical results related to the area on which Building 606 was constructed and verified that these results showed no elevated radiation levels. You are correct that one out of approximately 700 earlier systematic samples did show slightly elevated concentrations. However, all of this soil, including the one location with elevated concentration, was removed from beneath Building 606 to a depth of 5.5 feet in the late 1980s, before construction of the building. We plan to update our fact sheet to include these additional details. EPA still believes that the soil removal and installation of the concrete slab would protect workers from exposure to any potential radiation.

*Question 2. When you say "ventilated crawl" we are reading that as simple ventilation, **not** that it was designed with a vapor intrusion fan system, or the like. Again, our understanding is that radon and VOCs can concentrate beneath vapor barriers and slabs and migrate into a structure through tears and cracks. Concrete slabs also can mitigate radiation, but don't eliminate possible exposure.*

In any event, our understanding is that best practices would call for a mitigation system to be designed after an evaluation of the soil for VOCs/radium/other isotopes. From the documents we have seen, such an evaluation was never done of the soil beneath Building 606.

If that is accurate, how does the EPA know that the mitigation measures at Building 606 are adequate? If that is not accurate, can you please provide the soil evaluations and subsequent testing for VOCs and radon within the building?

As we explained in our earlier response, the VOCs detected in 1989 and 1990, nearly 30 years ago, can easily degrade or turn into a gas form and blow away. In addition, if significant VOC contamination were under or near Building 606, it would have washed into groundwater. No VOC detections were found in the two closest wells after sampling at least four times each in 1990 and 1991. Finally, the locations of the VOC detections are not directly under Building 606. In fact, one of them was 400 feet away from the building. (See Draft Final Report, Parcel D Remedial Investigation, 1996). The vapor barrier and ventilated crawl space described in the Finding of Suitability for Lease (FOSL) were installed out of an abundance of caution as an extra layer of protection.

In 2008, EPA reviewed the above information about VOCs and made a determination that the measures described in the FOSL would protect the workers at Building 606 from exposures above health-based standards due to vapors from under the building. EPA still believes this to be true, even if ventilation is passive and even if a vapor barrier has a tear or crack.

Furthermore, soil removed from under Building 503 did not show any elevated levels of radionuclides that could have decayed to Radon 222 (See Final Status Survey Report, Building 503, 2013). Naturally occurring radon has not been measured in the zip code where Building 606 is located. (See [HYPERLINK "http://www.city-data.com/radon-zones/California/California.html" \l "ixzz56Xkz8mXO"])

Question 3: We haven't been able to find any cancer risk estimates for Building 606, specifically, or Building 503. It is our understanding that is because those sites were never comprehensively tested. Is that accurate? If not, can you point us to any risk estimate specific to Building 606, or the 503 soil site it sits on top of?

Answer: Here is a link to the 2008 Parcel E Revised Remedial Investigation Report:

[HYPERLINK "https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=38440005&doc_id=5005436"]

This gives information about comprehensive testing at Parcel E. Appendix I of this document has the Human Health Risk Assessment. Attached is Appendix I3, which shows risks related to VOCs in Installation Restoration Site 08, which extends beyond Building 606. In addition, the Final Status Survey Report for Building 503, which you already have, provides calculations of cancer risk associated with measured concentrations in soil from the excavation of the 5.5 foot deep crawl space. Please contact the Navy for more information. You can reach Derek Robinson at 619-524-6026 or Bill Franklin at 619-524-5433.

Question 4: we did find a reference to a risk assessment for Building 606 from a ways back, in a Tetra Tech/Navy report of June 2000 -- "Draft Final Parcel E Risk Management Review Process." We can't find this report online and it's not clear the SF library has a copy. Do you have a copy you could share?

Answer: The Navy is required to maintain the full Administrative Record for the Hunters Point Naval Shipyard site. Here is the link on the Navy website to learn more about how to access site documents:

[HYPERLINK
"https://www.bracpmo.navy.mil/brac_bases/california/former_shipyard_hunters_point/documents1.html"]

You can also contact the Navy at the phone numbers listed above.

July 16, 2018
SF Chronicle, Jason Fagone/Cynthia Dizikes
Questions:
[reporters sent a 5-page document that included text for review and 20+ questions]

Response:
Thank you for your query regarding Hunters Point Naval Shipyard (HPNS) Building 606.

Many of the questions you asked and sections of text you asked EPA to review are most appropriately handled by other agencies. We are providing you with background information that will help to clarify the facts related to Building 606 and EPA's role.

The Navy, as the former owner and operator of the HPNS, is the lead agency responsible for the investigation and cleanup of HPNS. EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment.

As such, the Navy is responsible for drafting documents describing the nature and extent of any hazardous substances released on the site, such as the Environmental Baseline Assessments; evaluating the risks posed by those hazardous substances; and recommending what, if anything, needs to be done to address them prior to making a Finding of Suitability to Lease (FOSL). EPA is responsible for reviewing and evaluating these types of documents for accuracy, compliance with the Superfund law, and consistency with other site environmental documents that have been published.

In any case in which the federal government (here, the Navy) intends to lease a parcel on which hazardous substances are known to have been released or disposed of, the Superfund law requires the Navy to notify the lessee and potentially restrict the use of the property to mitigate any residual risk the contaminants could pose. In this case, EPA confirmed that the 2008 FOSL required such a notice to future lessees of Building 606 and appropriately restricted the use of the property, consistent with the Superfund law.

EPA believes the workers in Building 606 are protected from potential radiological and volatile organic compound contamination. The surface soil beneath the building has been excavated and removed to a depth of 5.5 feet. In addition, an 8 - 12" concrete slab provides protective shielding from potential radiation. Building 606 also has a vapor barrier and ventilated crawl space in place to protect building occupants from potential volatile organic compounds.

The attached map shows that the location of the single sample showing elevated levels of 1,4-dichlorobenzene is not close to Building 606. It also shows four detections of benzene in three

locations. Two of the locations are adjacent to Building 606, not under it, and one is beneath the parking lot. Benzene was not found in the groundwater monitoring well in the vicinity.

The Navy's Human Health Risk Assessment, which was performed related to volatile organic compounds, was based on extremely conservative assumptions. For example, it assumes that someone would be in contact directly with the chemical in soil, but in fact, Building 606 has a vapor barrier and ventilated crawl space. It also assumes that each chemical would be present in a uniform concentration over a widespread area, but in fact, most sampling locations did not show elevated levels of chemicals. Third, it assumes that each chemical would never reduce its volume, but in fact, nearly twenty years have passed since the original tests, and the chemicals are "volatile," which means that they can easily turn into a gas form and blow away, thus reducing their volume.

Regarding Buildings 507 and 508, please see attached Figure 5-1 from the Final Status Survey Report for Building 503. It shows that Buildings 507 and 508 overlap only with the southeast and southwest corners of the parking lot, not with Building 606. For reference, here is a link to the document about the excavation of the soil from underneath Building 503. [HYPERLINK "https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=38440005&doc_id=60320254 "]

As for questions about the prior work done by Tetra Tech EC Inc., EPA's focus right now is on working with the Navy and other regulatory agencies to create a sampling approach and plan for Parcels G. As we move forward, we will assess proposed retesting at all parcels where Tetra Tech EC Inc. did radiological work.

June 27, 2018
Inside EPA, Suzanne Yohannan
Questions:
[she had previously asked for copy of letter sent to House Minority Leader Nancy Pelosi]

Response:
Per your request, here is a copy of EPA's response to House Minority Leader Pelosi's letter about Hunters Point.

June 11, 2018
Inside EPA, Suzanne Yohannan
Questions:
I have a couple follow-up questions related to your responses below.

Has EPA responded yet to House Minority Leader Pelosi's letter about Hunters Point? (see Q1/A1 below.) If so, could I obtain a copy of EPA's response?

Is the workplan for retesting soil available to the public yet? (See Q2/A2.) If so, could I obtain a copy from you?

Is there anything more you can say about a possible ongoing investigation by EPA into Tetra Tech? I know that DOJ has an ongoing investigation. Is EPA part of that? Does the investigation include other cleanups/ cleanup sites?

When will it be completed?

Response:
Q1. Has EPA responded yet to House Minority Leader Pelosi's letter about Hunters Point? (see Q1/A1 below.) If so, could I obtain a copy of EPA's response?

No, we have not responded yet. Yes, we can share a copy with you once it is final.

Q2. Is the workplan for retesting soil available to the public yet? (See Q2/A2.) If so, could I obtain a copy from you?

The Navy is the lead on drafting the workplan and has stated that it is preparing a draft to give the public and EPA at the same time later this month. For more information, contact the Navy's Public Affairs Officer, William Franklin, at (619) 524-5433.

Q3. Is there anything more you can say about a possible ongoing investigation by EPA into Tetra Tech? I know that DOJ has an ongoing investigation. Is EPA part of that? Does the investigation include other cleanups/ cleanup sites? When will it be completed?

Any possible or ongoing investigation by EPA would be of a confidential nature and therefore not something we could discuss.

May 18, 2018
Inside EPA, Suzanne Yohannan
Questions:
This relates to a May 14 letter from House Democratic Leader Nancy Pelosi to EPA Administrator Pruitt and Navy Secretary Richard Spencer regarding Tetra Tech's work at Hunters Point.

In her letter, Rep. Pelosi asks that the Navy work with EPA and the state in collaborating on a resampling workplan.

She also asks that Parcel A -- which was transferred to San Francisco in 2004 -- be rescanned to ensure it is clean from radionuclides and contaminants.

Third, she calls on the Navy to "seriously consider" the evidence against Tetra Tech to see if suspension or disbarment are needed. And she says all federal agencies with contracts with Tetra Tech "should be made aware of the serious investigations underway regarding their work at Hunters Point, so that they can be on guard to safeguard against other potential fraudulent activities."

My questions are:
1. Has EPA responded to her letter, or does it plan to? If so, when? And can I obtain a copy of the response?

2. Is EPA working with the Navy and state of California on a workplan for retesting soil? If so, when will this be available?

3. Do EPA or the Navy plan to re-scan Parcel A? If so, when? If not, what are the reasons for declining to do so?

4. Do you know if EPA is considering suspending or disbarring Tetra Tech at Hunters Point, or at any other sites? If so, what other sites? Is EPA investigating whether Tetra Tech's falsifications/fraud extended beyond those two employees? Is it evaluating whether such fraud is occurring or occurred at other sites? If so, what is EPA doing about that? Has it alerted other federal agencies with contracts with that company about the Hunters Point convictions?

Response:
Q1. Has EPA responded to her letter, or does it plan to? If so, when? And can I obtain a copy of the response?

A1: Yes, EPA will be responding to the letter by early June. We can share a copy with you once it is final.

Q2. Is EPA working with the Navy and state of California on a workplan for retesting soil? If so, when will this be available?

A2: Yes, EPA is working with the Navy and state regulatory agencies on a workplan for retesting soil at Hunters Point Naval Shipyard. The Navy has said they expect to share a draft of the plan with the public for comment within the next month.

Q3. Do EPA or the Navy plan to re-scan Parcel A? If so, when? If not, what are the reasons for declining to do so?

A3: EPA is investigating the new allegations regarding Parcel A that have come to light and will release the results of our evaluation publicly.

Q4. Do you know if EPA is considering suspending or disbarring Tetra Tech at Hunters Point, or at any other sites? If so, what other sites? Is EPA investigating whether Tetra Tech's falsifications/fraud extended beyond those two employees? Is it evaluating whether such fraud is occurring or occurred at other sites? If so, what is EPA doing about that? Has it alerted other federal agencies with contracts with that company about the Hunters Point convictions?

A4: Tetra Tech EC Inc. is the Navy's contractor, and any questions regarding that contractual relationship should be directed to the Navy.

Any possible or ongoing investigation by EPA would be of a confidential nature and therefore not something we could discuss.

May 11, 2018

Q1: Does EPA have a statement on Tetra Tech's announcement yesterday that the Navy is "open" to TT's offer to pay for the retesting at HPNS?

A1: We have no information to provide at this time

Q2: The Navy so far has claimed that no retesting at Parcels E2 (landfill/metal slag area) and D1 (gun mole pier) is necessary because Tetra Tech EC did no work there. However, that does not appear to be correct. [reporter included links to reports, see below] Should the retesting area be expanded to include E2 and D (gun mole pier)? If not, why not?

A1: EPA's focus right now is on working with the Navy and other regulatory agencies to create a sampling approach and plan for Parcels G and B. As we move forward, we will assess proposed retesting at all parcels where Tetra Tech EC Inc. did radiological work.

May 4, 2018

Q1: Do you still maintain that the EPA's 2002 scanner van results are meaningful? Was it reasonable for the EPA to rely in part on the scanner van results in its decision to approve the transfer of Parcel A to San Francisco? (In a 2016 fact sheet on Parcel A, the EPA listed the 2002 scanner van survey as one reason that led to the EPA's approval of the transfer.

The scanner van technology is a "first look" at locating gamma emitting radionuclide contamination at or near the surface and is often used to prioritize more soil sampling for further radioanalyses. The results of the scanner van are one line of evidence that EPA relied on in investigating questions brought up regarding Parcel A, but it is not the only source of information. Please see below (response to question #2) for additional investigation and cleanup conducted on this parcel.

Q2: It's our understanding that there will now be resampling of parcels, and that Parcel A is not included. Given the allegations from the whistleblowers, and concerns about the inadequacy of the 2002 EPA scanner van survey of Parcel A, should a comprehensive soil survey for radiation now be conducted on Parcel A? If not, why not?

Historically, the majority of Parcel A was used for residences and administrative offices, not industrial activities. The only radiological materials found at Parcel A were sandblast grit and firebricks; these have since been removed. Former Buildings 322, 816, and 821 had potential for radiological contamination. The Navy scanned all three buildings and did not find radiological contamination above required cleanup levels. Buildings 322 and 816 were demolished and removed. Building 821 is located on Crisp Road, not in the developed portion of Parcel A. No other sources of radiological contamination were identified during the investigation or cleanup of Parcel A.

EPA understands that Tetra Tech EC Inc. did not do any radiological work at Parcel A except at Building 322, which was demolished and removed many years ago. In addition, following the removal of Building 322, an EPA health physicist conducted an independent scan of the area to confirm that the former building site was clean. The EPA health physicist did not detect any radiological contamination (attached is the memo documenting his work). Because the site was clean, it was transferred without restriction.

Q3: Specifically, have you followed up on the claim of Anthony Smith that he found a hot cesium sample on Parcel A? Should that specific location on Parcel A be tested for radiation and/or remediated?

EPA took seriously Mr. Smith's claim, and multiple EPA staff have conducted field visits to the location that Mr. Smith indicated. This location was actually on Parcel UC-2, adjacent to Parcel A. In 2012, after Mr. Smith's reported sample collection occurred, the Navy contractor Engineering / Remediation Resources Group removed all soil down to a depth of two feet below the surface (unless bedrock was encountered at a more shallow depth) and replaced it with clean soil at this location as part of placement of a "durable cover" required across the entire site. The new clean soil came from outside the shipyard and was tested for radiological and chemical contamination before it was imported. This link gives documentation of this cleanup work: **[HYPERLINK "http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=38440004&doc_id=60308702"]**.

Attached is a relevant excerpt from this documentation for your convenience.

Q4: There is a commercial kitchen close to the location where Smith says he took the hot cesium sample. Are you concerned about this, from a safety standpoint? Should the public be concerned? Should the owners and clients of the kitchen be concerned? If not, why not?

No, we are not concerned about this from a safety standpoint. Please see response to question #3.

Q5: There are construction crews who have recently worked on Parcel A without protective gear to prevent radiation exposure. Should they be concerned about possible exposure to radioactive materials? Should the people they come into contact with, such as their families, be concerned? If not, why not?

Based on the information we have at this time, we have no reason to question any cleanup work performed on Parcel A. Please see responses above.

Q6: Do you still have confidence in the work that Tetra Tech did on Parcel A cleanup, including its remediation of radiological contamination in a handful of buildings (322, 816, etc) and its replacement of excavated soil with backfill they said was clean?

Regarding buildings, please see the above response to question #2. Regarding backfill, we need more information before we can evaluate this concern. If there are any additional details to share about this concern, individuals can contact EPA's cleanup project manager Lily Lee at 415-947-4187 and [HYPERLINK "mailto:lee.lily@epa.gov"].

Q7: We have been told by a former Hunter's Point technician that he took a walk near the site in February of this year and observed the site through binoculars for an hour. He said he saw a dump

truck digging up loads of wet slushy material from the shoreline at the border of Parcel E/Parcel F, then driving the material to a hillside on or near Parcel A and dumped the material on the hill. Our source says there was no radiation control of the truck as it moved from a potentially contaminated part of the site (Parcel E/F) to Parcel A. Are you aware of any similar breakdowns in radiation protocol at the site right now? Have you investigated any such breakdowns?

This is the first we have heard of this information, so we cannot respond at this time. We will look into this further based on the information you have already provided. If there are any additional details to share about this event, individuals can contact EPA's cleanup project manager Lily Lee at 415-947-4187 and [HYPERLINK "mailto:lee.lily@epa.gov"].

May 3, 2018

Q1: I'm following up on my request for a statement from the EPA concerning the class action lawsuit that was filed against Tetra Tech by Hunters Point residents. I wanted to inquire about the EPA's position on the suit considering the EPA was partially in charge of overseeing Tetra Tech's cleanup effort during the time of the alleged fraud.

A1: We have no information to provide at this time.

Q2: I also wanted to get a statement concerning how Tetra Tech continues to be awarded EPA contracts despite widespread allegations of fraud.

A2: Neither Tetra Tech EC Inc., nor its parent company, Tetra Tech Inc., has been debarred or suspended from winning federal government contracts.

You can learn more about the contract award process here: [HYPERLINK "https://www.epa.gov/contracts"]

April 26, 2018

Q1: Will EPA explain why and how the "scanner van" would scan areas that were later remediated, including the utility corridors, as well as "areas of Parcel B, Parcel C, and minor portions of Parcels D and E," areas known to have contamination, and find nothing above background levels? Doesn't the van's failure to detect radioactive contamination in areas known to have contamination cast doubt on its results? If not, why not

A1. The scanner van technology is a "first look" at locating gamma emitting radionuclide contamination at or near the surface and is often used to prioritize more soil sampling for further radioanalyses. EPA did not base its decisions on how this site should be addressed based on the scanner van alone. Other forms of sampling and scanning provide additional useful information about potential contamination present at the site. As such, the later Records of Decision (RODs) required further excavation, sampling, and scanning.

The radiological scanner van survey gave information related to certain types of potential radiological exposures closer to the surface; it did not address all types of radiation potentially present or deeper locations of contamination. The scanner van survey is also subject to other limitations listed in the

attached report, e.g. only limited locations were accessible, asphalt would have shielded gamma radiation, etc.

Q2: Additionally, where can I find out more about the "EPA health physicist [who] conducted an independent scan of the area to confirm that the former building site was clean"? When was this done? Will you provide documents, or explain where documents may be kept?

A2. Steve Dean is an EPA health physicist who performed an independent scan of the area in 2004. Attached please find his memo documenting his work.

Q3: Lastly: Whistleblower Anthony Smith has sworn in the petition sent to the NRC last year that he took what was meant to be a background sample of soil from Parcel A. This soil was tested and was found to have "2 to 3 picocuries per gram of cesium-137, which Smith knew was much higher than background levels and the cesium-137 cleanup standard of 0.113 picocuries per gram – 18 to 26 times higher than the set health and safety ceiling." According to Smith, the area where this sample was taken is near Building 101, where the commercial kitchen is today on Parcel A. Was this report ever given to EPA? Did EPA or the Navy investigate? In any event, did EPA receive or is EPA party or privy to other reports or allegations of contamination on Parcel A?

A3. EPA has reviewed the petition, and multiple EPA staff have conducted field visits to the location that Mr. Smith indicated. This location was actually on Parcel UC-2, adjacent to Parcel A. In 2012, after Mr. Smith's reported sample collection occurred, the Navy removed all soil down to a depth of 2 feet below the surface (unless bedrock was encountered at a more shallow depth) and placed clean fill at this location as part of placement of a "durable cover" required across the entire site. This link gives documentation of this removal: [HYPERLINK "http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=38440004&doc_id=60308702"]. Attached is a relevant excerpt for your convenience.

Q4: Does EPA have on file the shipment manifests for truckloads of soil removed from the shipyard? If so I would like to request some.

A4: The Navy is responsible for maintaining the full Administrative Record for the Hunters Point Naval Shipyard. Here is a link to the Navy's website about this site: [HYPERLINK "https://www.bracpmo.navy.mil/brac_bases/california/former_shipyard_hunters_point.html"]

If you would like access to a document that is not available online, contact Derek Robinson: (619) 524-6026, [HYPERLINK "mailto:derek.j.robinson1@navy.mil"]

April 19, 2018

Q1: What is the EPA's role in the cleanup process at Hunters Point? For example, what is the agency's role in regards to the Navy, which bears the responsibility for site cleanup.

The Navy is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard. EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment.

For additional details on the Navy's role, here is the contact information for their press officer: William Franklin, U.S. Navy Public Affairs Officer, (619) 524-5433. You can also see the Navy's web page about this site at [HYPERLINK "https://www.bracpmo.navy.mil/brac_bases/california/former_shipyard_hunters_point.html"]

Q2: What are the main challenges to cleaning up a site like Hunters Point? What unusual aspects about the site make it particularly challenging?

This large site has many types of contaminants with potential impacts to soil, water, sediment, and the air. Please contact the Navy, the lead agency for the investigation and cleanup, for more information about cleanup challenges.

Q3: This site has multiple parcels with varying degrees of contamination and various stages of cleanup. How does this complicate the site cleanup and what challenges does this pose?

The different parts of the cleanup have varying timeframes for completion. Please contact the Navy, the lead agency for the investigation and cleanup, for more information about cleanup challenges.

Q4: What are the agency's next steps regarding the alleged false or unreliable soil samples from Tetra Tech? What would the EPA like to see happen to address this issue?

EPA sent the Navy the results of our independent review of Parcels B and G on December 29, 2017, and of Parcels D-2, UC-1, UC-2, and UC-3 on March 30, 2018. EPA is currently reviewing reports on Parcels E and C, and a report on various buildings located on the Hunters Point Naval Shipyard site. Regardless of the amount of falsification, the Navy has committed to resampling 100% of the survey units previously sampled by Tetra Tech. EPA's final review comments will help inform where the resampling will be done.

Q5: Would the EPA be able to provide any pictures of the Hunters Point site? We would be happy with birds-eye and/or ground-level views, especially if there's construction or trenches, etc.

Please see the Navy's web page about this site at [HYPERLINK "https://www.bracpmo.navy.mil/brac_bases/california/former_shipyard_hunters_point.html"]

April 19, 2018

1. Why is the EPA and Navy's assessment of the shipyard different?

Please see the attached report for EPA's findings from our independent review of Parcels B and G soil sample data. In regard to the discrepancy in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results. Please let us know if you have any specific questions about the report.

2. Does retesting samples on this scale deviate from the normal process of a cleanup like this?

Yes. It is not typical to find widespread signs of potential falsification of data or data quality concerns in a cleanup of this type.

3. It looks like there were warning signs that occurred before last week. What allowed the troubles to continue until now? *(reporter clarified that "warning signs" refers to an April 2014 report from Tetra Tech saying that they had submitted falsified soil samples, and the "troubles" are the ongoing issues related to the soil samples.)*

In 2012, the Navy's internal quality control review of work by its contractor, Tetra Tech EC Inc., discovered anomalous results in some Hunters Point Naval Shipyard soil samples. Subsequently, Tetra Tech EC Inc. identified several hundred anomalous soil samples, and, as a result, conducted additional sampling and removed contaminated soils. New information came to light in February 2016 as a result of an enforcement action taken by the Nuclear Regulatory Commission. In addition, later, several whistleblowers came forward in 2016 and 2017 and identified new and different allegations of data falsification and failures to follow the radiation cleanup work plan and procedures. These allegations triggered a much more comprehensive review of Tetra Tech EC Inc.'s work by the Navy, with oversight by EPA, the California Department of Toxic Substances Control and the California Department of Public Health. The new radiological data evaluation in 2017 and 2018 showed even more forms of falsification and data quality concerns.

EPA will continue to closely review information about any new concerns that come to light and to monitor the actions of the Navy and other agencies with regard to work by Tetra Tech EC Inc. to inform any further EPA action.

4. With retesting announced for the summer, what is the new expected timeline for the cleanup to finish?

The Navy will be resampling the impacted parcels and will rely on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done. The final plan for resampling is not yet complete, though the Navy has committed to resampling 100% of the survey units previously sampled by Tetra Tech EC Inc. The resampling results will determine how much additional cleanup may be needed, so at this time we are unable to predict how long that cleanup may take.

April 13, 2018
Chris Roberts, SF Curbed
Q1: Was the "scanner van" also used to scan other parcels on the shipyard remediated by the Navy? If so, where and when? *[Restated question:]* Were the other parcels scanned by EPA *after* Tetra Tech remediation work in the years that followed, i.e. 2004 to 2016?

EPA has not done any rescanning of whole parcels after the Tetra Tech remediation work.

Q2: You say that Building 322 was scanned by the Navy and demolished, and that EPA has "no reason to question any cleanup work" on that Parcel. However, according to the Navy, Building 322 was scanned by Tetra Tech, the same firm whose data is now called into question all over the base. And according to the draft radiological findings report for buildings, there was no data for that building. Does EPA's contention that there is "no reason to question" the work stand, in light of Tetra Tech's apparent fraud? If so, how can we trust this work, and not other work?

Yes, we stand by our previous statement that we have no reason to question any cleanup work performed on Parcel A. Following the removal of Building 322 and a Tetra Tech scan of the building

footprint, an EPA health physicist conducted an independent scan of the area to confirm that the former building site was clean. The health physicist did not detect any radiological contamination, so the site was determined to be transferable without restriction.

April 13, 2018
Inside EPA

Q1. Has EPA followed-up with the Navy -- is it requiring the Navy to re-take samples on 90 percent and 97 percent of those parcels to see if additional cleanup is needed before land transfer?
EPA is pleased that the Navy will be resampling the impacted parcels and relying on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done. The final plan for resampling is not yet complete, though the Navy has committed to resampling 100% of the survey units previously sampled by Tetra Tech.

Q2. Who will be re-taking any samples? Is it the same contractor, Tetra Tech, or someone else?
The Navy is using a third-party independent contractor; Tetra Tech will not be involved in this effort. EPA and the state regulators will be overseeing this process and taking split samples for independent analysis.

Q3. When will EPA be done with reviewing the other parcels at Hunters Point to see if the Navy was correct in determining how much of the sampling has signs of potential falsification, etc.?
EPA sent the Navy the results of our independent review of Parcels B and G on December 29, 2017 and of Parcels D-2, UC-1, UC-2, and UC-3 on March 30, 2018. EPA is currently reviewing reports on Parcels E and C, and a report on various buildings located on the Hunters Point Naval Shipyard site. Per Q1, regardless of the amount of falsification, the Navy has committed to resampling 100% of the survey units previously sampled by Tetra Tech. EPA's final review comments will help inform where the resampling will be done.

Q4. Is EPA investigating the use of Tetra Tech in cleanup contractors elsewhere, either in Region 9 or across the country? If so, can you offer details on when that investigation was launched and what it entails?
Any ongoing investigation by EPA would be of a confidential nature and therefore not something we could discuss.

Q5. Does EPA have any explanation for the discrepancy between EPA and the Navy over the review of sampling? Why such a difference in findings?
Please see the attached report for EPA's findings from our independent review of Parcels B and G soil sample data. In regards to the discrepancy in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results. Please let us know if you have any specific questions about the report.

April 12, 2018
San Francisco Chronicle, Caille Millner
Questions:

Q1 - What does "97% of survey units" mean in terms of clean-up? (Is that months, years, or just impossible?)

Q2 - Has the Navy responded to the numbers in the EPA's review?
Q3 - Did the EPA look at the soil results for areas where people are currently living/working on the property? (e.g. the artists studios in Parcel B, the new homes that were most recently built?)

Response:
Q1 and Q2:
The Navy will be resampling the impacted parcels and will rely on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done. The final plan for resampling is not yet complete, though the Navy has committed to resampling 100% of the survey units previously sampled by Tetra Tech EC Inc. The resampling results will determine how much additional cleanup may be needed, so at this time we are unable to predict how long that cleanup may take.

Q3:
The Navy transferred Parcels D-2, UC-1, and UC-2 to San Francisco in 2015, and construction on new projects within these parcels is only allowed with a specific work plan approved by the regulatory agencies. As part of the review process for any new construction proposals, EPA and its state regulatory partners assess any potential concern about radiological exposure and any other hazardous contaminants.

For example, EPA reviewed the draft workplan for the new artists' building, part of which is located on Parcel UC-2, before construction started. We researched the locations closest to the artists' building where Tetra Tech EC Inc. had done trench and other radiation cleanup work. None of the radiological work that is in question lies within the boundaries of the artists' building work. Therefore, EPA has no concern about radiological exposure—or any other hazardous contaminants—associated with construction of the artists' building.

EPA also has previously evaluated the potential current exposure to radiation at Parcel A, where the new homes have been built. We have no reason to question any cleanup work performed on Parcel A. Historically, the majority of Parcel A was used for residences and administrative offices, not industrial activities. The only radiological materials found at Parcel A were sandblast grit and firebricks, and these have since been removed. Former Buildings 322, 816, and 821 had potential for radiological contamination. The Navy scanned all three buildings and did not find radiological contamination above required cleanup levels. Buildings 322 and 816 were demolished and removed. Building 821 is located on Crisp Road, not in the developed portion of Parcel A. No other sources of radiological contamination were identified during the investigation or cleanup of Parcel A. In 2002, EPA conducted a radiological scanner van survey of Parcel A and navigable roads on other parts of the shipyard. All of the anomalies detected during the scan were attributable to natural occurring sources at levels consistent with what would normally be found in the environment.

April 12, 2018
KQED

FYI, two queries came in from KQED today; they are both closed now.

KQED Forum - Editor asked for EPA to take part in their live call-in program, discussing Hunters Point cleanup and soil sampling. I declined the request and offered to send information if he had specific questions.

KQED - Reporter Ted Goldberg asked for "EPA's statement on the recent disclosure of the agency's report showing more fraudulent soil testing data at Hunters Point."

April 12, 2018
To: 'Ted Goldberg' <[HYPERLINK "mailto:tgoldberg@KQED.org"]>
Subject: RE: KQED Question
Please see attached for the report in question, which EPA sent to the Navy on December 29, 2017. The report shows EPA's findings from our independent review of Parcels B and G soil sample data; please let us know if you have any specific questions about the report.

In regards to the discrepancies in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results.

EPA is pleased that the Navy will be resampling the impacted parcels and relying on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done.

April 11, 2018
SF Chronicle, Cynthia Dizikes
FYI, Chronicle reporter Cynthia Dizikes called me asking for a basic update about HPNS and the info from PEER press release. I provided her the previously-cleared message below, and asked her to let me know if she had any follow-up questions. Since she was also asking about timing of future reports, I directed her to the Navy.

Hi Cynthia,

Sorry about the delay. Please see below. And here is the contact information for the press officer for the Navy: William Franklin, U.S. Navy Public Affairs Officer, (619) 524-5433.

Please see attached for the report in question, which EPA sent to the Navy on December 29, 2017. The report shows EPA's findings from our independent review of Parcels B and G soil sample data; please let us know if you have any specific questions about the report.

In regards to the discrepancies in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results.

EPA is pleased that the Navy will be resampling the impacted parcels and relying on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done.

April 11, 2018
SF Curbed
Questions:

- Wanted to see what the best way to discuss with EPA the findings from the most recent radiological findings report from the Hunters Point shipyard -- these, related to buildings -- might be. As the report says, the cleanup data from buildings appears to have been falsified--but the report also says that a building on Parcel A, building 322, was scanned and declared clear by Tetra Tech back in 2004. Based on what we know now, can that declaration be trusted? And in any event, how can we be certain that that building is in fact clean and poses no danger to the environment or the public--and what, if any, actions will be taken as a result? [Also, paraphrased from reporter's voicemail: Whistleblowers have declared that Parcel A had contamination; how are those concerns being addressed?]

- Also, it looks like the EPA is also reviewing Tetra Tech's data. Has EPA produced comments on all of the Navy's draft radiological findings reports? Will EPA provide copies of all comments on the draft radiological findings reports produced to date?

- Today, an organization called PEER put out a release in which the EPA's comments on the US Navy's draft radiological findings reports from the former Navy shipyard at Hunters Point in San Francisco, an EPA Superfund site, were published. But only the EPA comments on Parcels B and G were obtained. Has the EPA commented on the draft radiological findings reports from the other parcels? If so, can EPA provide those documents?

- I understand that prior to the transfer, EPA ran a "scan van" over Parcel A and collected its own cleanup data to verify the Navy's. Is that accurate? Can you provide those findings? And was the "scan van" run over other parts of the base after other Navy cleanup?

Response:
We have no reason to question any cleanup work performed on Parcel A. Historically, the majority of Parcel A was used for residences and administrative offices, not industrial activities.

The only radiological materials found at Parcel A were sandblast grit and firebricks, these have since been removed. Former Buildings 322, 816, and 821 had potential for radiological contamination. The Navy scanned all three buildings and did not find radiological contamination above required cleanup levels. Buildings 322 and 816 were demolished and removed. Building 821 is located on Crisp Road, not in the developed portion of Parcel A. No other sources of radiological contamination were identified during the investigation or cleanup of Parcel A. In 2002, EPA conducted a radiological scanner van survey of Parcel A and navigable roads on other parts of the Shipyard (please see attached report). All of the

anomalies detected during the scan were attributable to natural occurring sources at levels consistent with what would normally be found in the environment.

Please see attached for copies of EPA's independent review of Parcels B and G (attachment #1) and Parcels D-2, UC-1, UC-2, and UC-3 (attachment #2). Please note, for the report on Parcels D-2, UC-1, UC-2, and UC-3 (attachment #2), there is a small typo in Table 2. Where it says "71%" in the last row of Table 2, it should actually say "85%". Please let us know if you have any specific questions about these reports.

EPA is pleased that the Navy will be resampling the impacted parcels and relying on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done.

April 10, 2018
KQED
Q: I'm working on a quick radio story for KQED about the need to resample the soil at Hunter's Point. Would you be available for a quick phone call?

Response:
Please see below for our response. By the way, in regards to your question about different agencies: the Navy is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard. EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment. Here is the contact information for the press officer for the Navy: William Franklin, U.S. Navy Public Affairs Officer, (619) 524-5433.

Please see attached for the report in question, which EPA sent to the Navy on December 29, 2017. The report shows EPA's findings from our independent review of Parcels B and G soil sample data; please let us know if you have any specific questions about the report.
In regards to the discrepancies in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results.

EPA is pleased that the Navy will be resampling the impacted parcels and relying on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done.

April 9, 2018
NBC Bay Area

Question: I was just sent the following press release regarding the EPA's review of soil samples at Hunters Point. The organization "PEER" reviewed EPA records and learned the EPA found between 90 and 97 percent of the samples at Parcels B and G reexamined by the agency are "neither reliable nor defensible." These percentages appear to be much higher than the Navy's percentages for Parcels B and G. Can the EPA please help explain this discrepancy?

Response:
Please see the attached report for EPA's findings from our independent review of Parcels B and G soil sample data. In regards to the discrepancy in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results. Please let us know if you have any specific questions about the report.

EPA is pleased that the Navy will be resampling the impacted parcels and relying on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done.

April 9, 2018
SF Examiner –
Reporter said she had heard that EPA had released a report saying that contamination numbers are higher than what Navy had previously reported.

Response:
Please see attached for the report in question, which EPA sent to the Navy on December 29, 2017. The report shows EPA's findings from our independent review of Parcels B and G soil sample data; please let us know if you have any specific questions about the report.

In regards to the discrepancies in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results.

EPA is pleased that the Navy will be resampling the impacted parcels and relying on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done.

April 9, 2018
SF Business Times –
Reporter said she had seen the PEER report saying that EPA documents show that soil sample falsification is greater than previously reported. She is asking 1) if the documents in question are official EPA documents, and 2) what happens next (eg, will we ask Navy to re-do all testing?)

Response:
Yes, the report in question is an official EPA document; please see attached for the full report. The report shows EPA's findings from our independent review of Parcels B and G soil sample data; please let us know if you have any specific questions about the report.

In regards to the discrepancies in the percentages, EPA's assessment of the data included looking more closely for signs of potential data quality problems in addition to signs of potential falsification. For

example, EPA recommended resampling when data were missing or when different data collection methods did not produce consistent results.

EPA is pleased that the Navy will be resampling the impacted parcels and relying on these new data to determine where additional cleanup may be needed. EPA's input, which is based on our independent review of the data, will help inform where the resampling will be done.

March 5, 2018

Question: Just so we're clear: to the question of whether the work done at the parcels that may now be unclean poses or posed any threat, the answer is that EPA believes "current procedures and protocols will protect current workers and residents"?

Answer: Due to uncertainty related to data falsification in Tetra Tech EC Inc. radiological work done on Parcels D-2, UC-1, and UC-2, EPA has reviewed potential threats associated with existing and past conditions. We believe that past and current procedures and protocols have protected and will continue to protect past and current workers and residents from concerns associated with falsification. In addition, to protect future workers and residents, we are working with the Navy and the state of California on plans to ensure that any radiological contamination that may remain on-site is found and cleaned up to the standards set in the cleanup decision documents.

March 2, 2018

Questions:

- Is it just radiological contamination that is under control at the 3 parcels, or is it all contaminants?
- Does EPA still believe that all work done at the UC parcels, a PDF of which is attached, poses no risk to workers or the public?
- If we are saying there is no risk, how do we know that? How is it that land that was called clean is not clean?
- Didn't the data used to make the contentions in the FOST documents come from Tetra Tech data? If so, how much confidence can the EPA and the public have in it?
- The Navy has contacted (or perhaps will be contacting?) the city of SF with plans for those 3 parcels; is EPA aware of those plans?

Response:

EPA is still investigating the impacts of Tetra Tech EC Inc.'s failure to follow the cleanup work plan at Hunters Point Naval Shipyard. Our focus is on ensuring both that no current workers or residents are exposed to hazardous materials and that future residents and workers are protected. We believe that current procedures and protocols will protect current workers and residents, and we are working with the Navy and the state of California on plans to ensure that any radiological contamination that may remain on-site is cleaned up to the standards set in the cleanup decision documents.

Even though the Navy transferred Parcels D-2, UC-1, and UC-2 to San Francisco in 2015, construction on new projects within these parcels is only allowed with a specific work plan approved by the regulatory agencies. As part of the review process for any new construction proposals, EPA and its state regulatory

partners assess any potential concern about radiological exposure and any other hazardous contaminants.

For example, EPA reviewed the draft workplan for the new artists' building, part of which is located on Parcel UC-2, before construction started. We researched the locations closest to the artists' building where Tetra Tech EC Inc. had done trench and other radiation cleanup work. None of the radiological work that is in question lies within the boundaries of the artists' building work. Therefore, EPA has no concern about radiological exposure—or any other hazardous contaminants—associated with construction of the artists' building.
EPA is not aware of any city plans for new proposed construction projects on these parcels in the near future.

2017

October 6, 2017
Freelancer, Laura Newberry
I have one more question regarding the Shipyard: do you have any documents that lay out how the Navy is taking sea level rise and earthquakes into account as it remediates the land? I want to make sure I'm thorough in my explanation.
Response:
The public documents below, which were submitted to EPA and other regulatory agencies by the Navy for review and approval, provide background on Parcel E-2, which includes the retaining wall and sea wall referenced in our previous response.

- This report describes the remedial design selected for Parcel E-2 and provides details about the consideration of sea level rise and earthquakes: [HYPERLINK "http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=38440005&doc_id=5005528"]
    - Please see the attached pdf for an excerpt of the design report that is most relevant to your question.

- This is the proposed plan, which gives background of the site and the Navy's proposed remedy:

[HYPERLINK "http://www.envirostor.dtsc.ca.gov/public/deliverable_documents/8317823112/Parcel_E-2_ProposedPlan.pdf"]

- Finally, as background, here is the Record of Decision for Parcel E-2:

[HYPERLINK "http://www.envirostor.dtsc.ca.gov/public/deliverable_documents/9484805047/Hunters%20Point%20Naval%20Shipyard%2C%20SF%2C%20CA%20Site_Final_E-2_ROD_11.2012.pdf"]

September 28, 2017
Freelancer, Laura Newberry

Please see below for answers to your questions. For additional information on the Hunters Point Naval Shipyard cleanup, you can contact William Franklin, Navy public affairs officer: (619) 524-5433, [HYPERLINK "mailto:william.d.franklin@navy.mil"].

Q1: To what extent is the EPA overseeing this remediation project?
EPA helps protect human health and the environment by managing the cleanup of hazardous waste sites across the nation. In the case of former military sites, such as the Hunters Point Naval Shipyard (HPNS), the Department of Defense is the lead for the investigation and cleanup. In overseeing the Navy's cleanup of the HPNS, EPA's goal is to ensure that the community is protected from exposure to radiation and other hazardous substances and that the site can be used for work, recreation, and residential purposes.

Q2: What has been the nature of the EPA's engagement with the Navy through this project? how are you coordinating remediation efforts with the Navy? Who takes the lead on what?
The Navy is the lead agency responsible for the investigation and cleanup of the HPNS. EPA and the State of California regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at the HPNS protects human health and the environment. The Navy and regulatory agencies work together to decide how to address the contamination; the Navy also gathers community input through a public process.

Q3: How is the EPA working with the community members who live near the Shipyard? How are community members being involved in the cleanup?
The Navy leads the community involvement process at HPNS, which has included hiring a local community liaison and a community technical advisor, hosting bus tours and community workshops, and giving presentations for local organizations. EPA participates in Navy community engagement events, takes part in meetings hosted by local organizations, and responds to inquiries from the general public.

Q4: Can you help me explain to readers why two consulting firms / subcontractors for the Navy (Tetra Tech and CH2M Hill) might have produced false information for their remediation reports?
The Navy manages the contracts for the HPNS cleanup. Please contact the Navy with any questions about contractors' work at the site.

Q5: How does the EPA take into account sea level rise and potential natural disasters (namely earthquakes) when overseeing this sort of coastal remediation work?
When approving a remedy for a Superfund site, EPA takes into consideration the long-term effectiveness and permanence of the potential remedy. The effects of sea level rise and potential natural disasters are usually considered as part of this approval process.

The Navy accounted for sea level rise as part of its process in designing the cleanup at the HPNS. For example, at the landfill in Parcel E-2, the combined size of the retaining wall and sea wall, once complete, will be 35 feet wide and twelve feet higher than the current average sea level. The walls are built to withstand future sea level rise, severe earthquakes, and waves as high as any experienced in the past one hundred years. These walls are just one part of a comprehensive protection system, which also includes a cover of clean soil up to six feet deep.

In addition, in cases where hazardous substances, pollutants or contaminants remain onsite at levels higher than would allow for unlimited use and unrestricted exposure, the adequacy of a Superfund site's

cleanup remedy is reevaluated no less than every five years. As such, the Navy will continue to review the remedy at the HPNS in future to ensure protection of human health and the environment.

Q6: How are congressional budgets affecting the EPA's work in this specific case and in other cases like this?

For Superfund sites on military facilities, such as the HPNS, the Department of Defense (DoD) is responsible for the investigation and cleanup of the site. Over the years, EPA's oversight costs have come from both DoD and EPA's budget. Generally, EPA's oversight costs for Superfund sites at military facilities come from EPA's budget. However, at the HPNS, the Navy has provided a short-term supplement to cover some of EPA's work.

Q7: How is the EPA taking into account the disproportionate rates of asthma and cancer in this community as it oversees this cleanup?

Before EPA approves any cleanup plan, a rigorous Human Health Risk Assessment analysis is conducted, which takes into account the sensitivity of children, seniors, and other vulnerable populations. We are using an approach that is protective for all populations, including those who have disproportionate rates of health effects. In addition, the Navy and EPA are obligated to review the integrity of the cleanup remedy at least every five years to ensure that the systems in place are still protective of residents and the environment.

July 27, 2017

Freelance, Chris Roberts

Q. I wanted to reach out and see what the best way might be to secure documents presented at some ongoing meetings, at which EPA is an attendee, regarding the cleanup. About once a month, the Navy, EPA, and state and local authorities have been meeting at SF City Hall for "Tiger Team" meetings, organized by the SF Mayor's Office. The Navy is presenting updates at these meetings, as does EPA, according to some documents I've been able to retrieve. Wanted to see if I could see what the Navy and the EPA have been presenting. I've asked the Navy as well, but I know that EPA should have these documents, and so I wanted to ask here as well. Will you provide these documents, in electronic format, without the ceremony and headache of a FOIA? Let me know.

A. The United States Navy (Navy) is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard Superfund Site (HPNS). The United States Environmental Protection Agency (EPA) and the State of California regulatory agency partners (State) oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment. The San Francisco Mayor sometimes invites the Navy to give updates on the site cleanup, and we attend when invited to respond to any questions that may arise. The Navy, as the lead on the cleanup, gives presentations. EPA has not given any presentations. However, attached are handouts that we have distributed at the meetings:

1. EPA letter to the Navy (Dated December, 2016)
2. Fact sheet about Parcel A residents (Dated October, 2016)
3. Fact sheet about Artist Studios and Police Department building (Dated October, 2016)
4. Brownfields fact sheet (Dated February, 2016)
5. Brownfields fact sheet – updated (Dated June, 2016)

Please note that EPA updated the Parcel A fact sheet in July, 2017. I can provide that if requested.

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July 13, 2017
Inside EPA, Suzanne Yohannan

I'm a reporter for Inside EPA, covering waste policy. I have a few questions that I'm hoping you can answer that relate to Hunters Point Superfund site, and Tetra Tech work as a cleanup contractor at the site.
EPA Region 9 last year wrote a letter to the Navy noting ongoing investigations into the veracity of Tetra Tech's data on the cleanup there, and transfers of property were suspended. Can you tell me what the status is of those investigations (or at least EPA's)? What were EPA's findings? When did they come out? Is cleanup now occurring? Are transfers of property no longer suspended? Is an enforcement investigation by EPA still ongoing? If so, can you tell me the parameters of the investigation -- what is EPA specifically examining?
Also, can you tell me whether EPA is conducting a criminal investigation at this time at the site? If so, who and what is EPA investigating?

Response:
The United States Navy (Navy) is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard Superfund Site (HPNS). The United States Environmental Protection Agency (EPA) and the State of California regulatory agency partners (State) oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment.

The transfer of some HPNS parcels to the City of San Francisco for redevelopment has been delayed at least a year due to the falsification of radiation data by the Navy's contractor, Tetra Tech EC, Inc. The Navy, under EPA oversight, is addressing these falsifications by re-assessing past data, taking new samples, and, if necessary, conducting additional cleanup.

EPA is taking this data falsification very seriously, as preventing current and future residents and workers from being exposed to contamination is our utmost priority. EPA has evaluated the allegations made against Tetra Tech EC and has concluded that the multiple layers of oversight in place at HPNS have prevented and will continue to prevent current residents and workers from being exposed to contamination above health-based standards. Under EPA and State oversight, an independent third-party contractor (not Tetra Tech EC) has been hired by the Navy to evaluate past data, conduct re-sampling, and evaluate new data taken from areas resampled. This independent effort will evaluate the potential for exposure to future residents and workers. The results will determine if more cleanup action is necessary before transfer of additional property to the City/County of San Francisco proceeds.

Independent radiological monitoring of dust, groundwater, ground surfaces, and fence lines have shown no exceedances of health-based standards, and independent third-party contractors routinely conduct

in-person observations of current radiological cleanup work. Additionally, EPA and the Navy have agreed that the Navy will not propose any further transfers of property at HPNS without confirming through investigation results and/or other actions that the cleanup standards for radiological contamination have been met.

For a status update on the site's cleanup, please contact William Franklin, U.S. Navy Public Affairs Officer, at (619) 524-5433.

For questions about actions by the Nuclear Regulatory Commission, please contact Diane Screnci at 610-337-5330.

Any ongoing investigation by EPA would be of a confidential nature and therefore not something we could discuss.

February 8, 2017
KQED, Peter Jon Shuler
I'm trying to get a comment regarding tonight's meeting with the Navy about soil tests at Hunters Pont and allegations regarding Tetra Tech.

Response:
The Navy is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard (HPNS). EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment.
EPA takes seriously the allegations regarding Tetra Tech EC. Currently, we are waiting for the Navy's data evaluation and sampling effort, which is being conducted by a Navy independent third party contractor (not Tetra Tech EC) under EPA oversight. We expect the sampling results will confirm that the multiple layers of oversight that are in place have prevented and will continue to prevent current residents and workers from being exposed to contamination above health-based standards. This effort will also evaluate the potential for exposure to future residents and workers. The results will determine whether or not more cleanup action will be necessary before redevelopment of additional property proceeds.

Independent radiological monitoring of dust, groundwater, ground surfaces, and fence lines have shown no exceedances of health-based standards, and independent third party contractors routinely conduct in-person observations of current radiological cleanup work. Additionally, EPA and the Navy have agreed that the Navy will not propose any further transfers of property at HPNS without clarifying—through investigation results and/or other actions—the actual potential public exposure to radioactive material at and near HPNS.

The Navy is the lead agency responsible for the investigation and cleanup of the Shipyard. The point of contact is William Franklin (619) 524-5433.

February 7, 2017
SF Chronicle, J. K. Dineen
Q: What is the latest on the probes into Tetra Tech testing?
A: The Navy is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard (HPNS). EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) and other requirements to ensure the cleanup at HPNS protects human health and the environment.

EPA is taking the allegations regarding Tetra Tech EC very seriously. We are waiting for the Navy's data evaluation and sampling effort, which is being conducted by a Navy independent third party contractor (not Tetra Tech EC) under EPA oversight. We expect the sampling results will confirm that the multiple layers of oversight that are in place have prevented and will continue to prevent current residents and workers from being exposed to contamination above health-based standards. This effort will also evaluate the potential for exposure to future residents and workers. The results will determine whether or not more cleanup action will be necessary before redevelopment of additional property proceeds.

Independent radiological monitoring of dust, groundwater, ground surfaces, and fence lines have shown no exceedances of health-based standards, and independent third party contractors routinely conduct in-person observations of current radiological cleanup work. Additionally, EPA and the Navy have agreed that the Navy will not propose any further transfers of property at HPNS without clarifying—through investigation results and/or other actions—the actual potential public exposure to radioactive material at and near HPNS.

For questions about actions by the Nuclear Regulatory Commission, please contact Diane Screnci at 610-337-5330. If any enforcement-related investigations are ongoing in other parts of the federal government, those matters may be enforcement confidential.

Q: What is happening with the $7M that Pelosi helped to get for review of Tetra Tech's work?
A: The Navy is the lead agency responsible for the investigation and cleanup of the Shipyard. For questions about funds provided to the Navy, please contact William Franklin (619) 524-5433.

Q: What is the latest on the site's cleanup?
A: The Navy is the lead agency responsible for the investigation and cleanup of the Shipyard. For a status update on the site's cleanup, please contact William Franklin (619) 524-5433.

2016

December 8, 2016
SF State University, Alena Naiden
The questions I have center around the ongoing investigation on Tetra's misrepresentation of data delivered to the Navy.

Question: How did the misrepresentation come to light?

Answer: In 2012, the Navy's internal quality control review of work by its contractor, Tetra Tech, discovered discrepancies from the results they would have expected in some Hunters Point Naval

Shipyard soil samples. Subsequently, Tetra Tech conducted an investigation, resampled the areas of concern, and excavated soil that had levels of contamination above health-based cleanup goals. Tetra Tech summarized their actions in a report dated April 2014. In addition, in February, 2016, the Nuclear Regulatory Commission issued a Notice of Apparent Violation to Tetra Tech EC, Inc. (described here: [HYPERLINK "http://www.nrc.gov/docs/ML1604/ML16042A074.pdf"])

For additional details, please contact the Navy; their media contact for Hunters Point is William Franklin: (619) 524-5433, [HYPERLINK "mailto:william.d.franklin@navy.mil"].

And here is contact information for NRC: Diane Screnci, public affairs officer: 610-337-5330

Question: Who is investigating it? What are the next steps in the process?

Answer: In the Superfund Program, EPA and its state regulatory agency partners (the California Department of Public Health and the California Department of Toxic Substances Control) oversee and enforce the Navy's compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (commonly known as Superfund), to ensure the cleanup protects human health and the environment. EPA met with officials from the Navy and CA DTSC on July 14, 2016. At that time, it was agreed that the Navy would not propose any further transfers of property from the Hunters Point Naval Shipyard until ongoing investigations into work done by Navy contractor, Tetra Tech, were resolved. (see attached letter)

The Navy has announced that it would hire a third party independent contractor to review radiological work conducted by Tetra Tech at the Hunters Point Naval Shipyard. This review will determine what aspects of that work require additional assessment, such as extra sampling. The additional assessment will begin after regulatory approval of the work plan. The agencies are continuing to meet regularly to coordinate with one another on this issue. Please contact the Navy for additional details.

In addition, the Nuclear Regulatory Commission concluded its own investigation recently (described here: [HYPERLINK "http://www.nrc.gov/docs/ML1628/ML16285A465.pdf"]).

EPA's site management team continues to investigate all of the allegations to protect human health and safety and ensure that the clean-up has been adequately performed.

Please contact the Navy and NRC for additional details on their investigations.

How can it possibly affect the community?

EPA uses the best available science to develop guidance for cleaning up sites, such as Hunters Point Naval Shipyard, that are contaminated with radioactive materials. If radiation exposure is too high, it can cause damage to living tissue and DNA, which can lead to cancer or other health effects. The risk of cancer increases as exposure to radiation increases. EPA's role for the Hunters Point Naval Shipyard cleanup is to ensure that the community and workers are protected from exposure to radiation and that the site can be used for work, recreation, and residential purposes.

EPA has also provided fact sheets to the current residents on Parcel A of the Hunters Point site and leasees who work at the shipyard, which are attached.

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December 1, 2016

SF Magazine, Chris Roberts
Question: Do we know when the Navy plans to hire its contractor? And do we know exactly what the contractor will be reviewing -- Tetra Tech's work, but all of it? Some of it? And in the meantime, Tetra Tech is still on-site at work at HPNS, correct?
Answer: Here is the Navy's media contact for Hunters Point: William Franklin: (619) 524-5433, [HYPERLINK "mailto:william.d.franklin@navy.mil"]

November 29, 2016
SF Magazine, Chris Roberts
Question: Via a phone call, Chris Roberts asked for an update on the Hunters Point briefing that SF officials had requested of EPA and the Navy. Specifically, whether it had happened yet and if there were any public documents available related to it.

Answer: On November 3, 2016, senior managers from the Navy, US Environmental Protection Agency and the State of California Department of Toxic Substances Control provided a briefing on efforts to address issues surrounding the Hunters Point Naval Shipyard radiological cleanup to Mayor Edwin Lee, Supervisor Malia Cohen, and Robert Edmonson, Chief of Staff to Congresswoman Pelosi, who joined by phone.

The Navy announced that it would hire a third party independent contractor to review radiological work conducted by Tetra Tech EC, Inc., at the Hunters Point Naval Shipyard. This review will determine what aspects of that work require additional assessment, such as extra sampling. The additional assessment will begin after regulatory approval of the work plan. All participants agreed to monthly meetings with the Mayor and Supervisor to monitor progress. The agencies are continuing to coordinate with one another on this issue.

Attached is a letter, dated November 22nd, from Congresswoman Pelosi to the Navy and EPA, which was sent in response to the November 3rd meeting.

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October 20, 2016
SF Magazine, Chris Roberts
Question: When you say the "whole site," do you mean all parcels at the Shipyard?

Answer: Yes, since 2009, all the parcels at the Shipyard have been required to install a protective cover.

Please note, Parcel A was removed from the Superfund National Priorities List in 1999 and transferred from the Navy in 2004. As such, it was not impacted by the protective cover decision in 2009. However, no allegations have been made regarding the integrity of any of the cleanup work conducted at Parcel A. The property had previously been used primarily for residential and administrative purposes and the limited radiological materials found there were removed before transfer.

Question: Where can we learn more about the nature of the protective cover?

Answer: Protective covers can be asphalt and concrete surfaces, building foundations, or a two-foot thick soil cover. Details about each parcel's protective cover are provided in the Remedial Design documents found here: [HYPERLINK "http://www.envirostor.dtsc.ca.gov/public/search.asp?CMD=search&city=San+Francisco&zip=&county=&case_number=&business_name=&FEDERAL_SUPERFUND=True" \t "_blank"] .

Question: And I want to be clear -- the initial PRGs proposed by the Navy are different than the current, default PRGs. We are saying that even though the Navy used the initial PRGs which are different than current defaults, the cleanup achieved is compliant with those defaults?

Answer: Yes, the cleanup is compliant using PRGs calculated at the default level.

EPA routinely reviews the Navy's cleanup reports for each survey unit (the name for a small area of land or part of a building sampled) of the Shipyard using the latest version of the EPA risk model to make sure that radiation levels are within the protective 10^{-4} to 10^{-6} cancer risk range. ("Latest version" refers to whichever version is current at the time that EPA reviews each report.) As a screening level evaluation, EPA uses the default assumptions, an exposure scenario much higher than realistic for the expected future use at the former Shipyard, and has found all cleanups achieved the protective cancer risk range.

Also, in 2016, EPA reviewed the Navy's past Shipyard cleanup reports, applying the current EPA PRG Calculator risk model. This was done both using default assumptions and using site-specific factors based on future land uses at the Shipyard, a more realistic scenario. EPA found that the past cleanups also achieved the protective range, even using the default assumptions in the current version of the risk model.

Question: Whose data are we using to make that assertion? The Navy's? Did the EPA also conduct testing to ensure the Navy's data is accurate?

Answer: Yes, we are using the Navy's data. The Navy is the lead agency responsible for the investigation and cleanup of the Shipyard. EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Superfund law to ensure the cleanup at the Shipyard protects human health and the environment. With the Navy as the lead, EPA relies on their adherence to established quality assurance protocols. However, both EPA and the California Department of Public Health have routinely conducted field audits and limited independent scans, sampling, and/or analysis for radionuclides at HPNS. These efforts did not identify any issues that made EPA question the Navy's data.

October 19, 2016
NBC Bay Area, Liz Wagner
Question: Can you please send me the letter that Rep. Nancy Pelosi sent to the EPA regarding Hunters Point?

Answer: Here you go (please see attached).

[EMBED Acrobat.Document.DC]

October 18, 2016
SF Chronicle, Kathleen Pender
Question: does this sound right...enough?
The Shipyard is a Superfund site, with the Navy responsible for cleanup. Lennar does not acquire any property there until the U.S. Environmental Protection Agency has certified it as safe. It acquired the Hilltop property from the city in 2004, and began to undertake infrastructure. Other areas are still undergoing remediation.
Answer: Thank you for sending your paragraph for review. Please see below for some clarifying information. Let me know if you have additional questions.
Most of the former Hunters Point Naval Shipyard (HPNS) remains a Superfund site. Parcel A of the former Shipyard, which includes hilltop property that is now being developed, was removed from the Superfund National Priorities List in 1999 and transferred in 2004. Therefore Parcel A is no longer part of the Superfund site.
The Navy is the lead agency responsible for the investigation and cleanup of HPNS. As part of the process, EPA and its state regulatory agency partners (the California Department of Public Health and the California Department of Toxic Substances Control) oversee and enforce Navy compliance with the Superfund law to ensure the cleanup at HPNS protects human health and the environment.
Parcels of land are transferred for development only after the Navy has finished all cleanup work and EPA and other regulatory agencies have agreed that the cleanup is complete.
For background reference, here is a link to a fact sheet about the transfers process:
[HYPERLINK "https://urldefense.proofpoint.com/v2/url?u=https-3A__yosemite.epa.gov_r9_sfund_r9sfdocw.nsf_3dc283e6c5d6056f88257426007417a2_8fef336269a7af3a88257da900805405_-24FILE_24523543.pdf_Hunters-2520Point-2520Parcel-2520Transfer-2520Overview-2520Final-5F11-2D17-2D14-2520LL.pdf&d=DQMFAg&c=B73tqXN8Ec0ocRmZHMCntw&r=1JBk5NDbsSKUoG69sk1qhIO7X4ZFustQ6VysRWtMuUk&m=WkFW4sO1SmQ09CYZb6DgdSm9oCwrPCk41UK4MNX82DE&s=wHdPiDWNflVb6VKl808b-DhKbRwqxjnCdsCRoEPR2YQ&e="]

Follow up response from reporter:
Here's what I'm saying now:
Most of the former naval shipyard remains a Superfund site, with the Navy responsible for cleanup. Parcels of land are transferred for development only after the U.S. Environmental Protection Agency and its state partners have agreed that cleanup is complete. The Hilltop property was taken off the Superfund list in 1999. Lennar acquired it in 2004 and began infrastructure development.

October 17, 2016
SF Magazine, Chris Roberts
Question: Can you tell me what the site-specific information is that I omitted from the EPA's PRG calculator?

Answer: The site-specific information for Hunters Point Naval Shipyard is that the Navy is installing a protective cover over the whole site and that future occupants will only be allowed to grow plants (including those that would be eaten) in raised beds. However, even if the PRG is calculated at the default level, the Navy's cleanup still brings radiation to levels within the protective range.

October 12, 2016
SF Magazine, Chris Roberts
Question: Do you know if the EPA gave the City and County of SF a response to the formal letter city leaders sent on 9/19? A copy is attached. Do we know if city officials received the briefing?
Response: EPA is currently working with the mayor's office to set up a briefing for the city.

Question: Does EPA know which agencies are investigating the data given to the Navy by Tetra Tech?
Response: EPA is aware of an investigation by the Nuclear Regulatory Commission (described here: [HYPERLINK "http://www.nrc.gov/docs/ML1621/ML16211A133.pdf" \t "_blank"]) and another by the Navy. Here is contact information for both groups:

· Diane Screnci, NRC public affairs officer: [HYPERLINK "tel:610-337-5330" \t "_blank"]

· William Franklin, Navy public affairs officer, [HYPERLINK "tel:%28619%29%20524-5433" \t "_blank"], [HYPERLINK "mailto:william.d.franklin@navy.mil" \t "_blank"].

Question: I have a question regarding the preliminary remediation goals in the HPNS cleanup and the PRGs I saw online using the EPA's own calculator at [HYPERLINK "https://epa-prgs.ornl.gov/radionuclides/" \t "_blank"]. It looks like the PRGs in the HPNS cleanup standards and the PRGs on the EPA's website are different. Attached for your convenience is a page from the HPNS basewide cleanup memo, and the PRGs for the same radionuclides of concern from the EPA's own calculator. Can you help me explain why they are different? It appears the levels of radionuclides allowed in the table in the basewide RAD memo are higher than in the EPA's PRG calculator.

Response: The PRG calculator can be used with either default values or values that have been tailored with site-specific information. The PRG Users Guide ([HYPERLINK "https://epa-prgs.ornl.gov/radionuclides/prg_guide.html" \t "_blank"]) recommends modifying the default values using site-specific information to calculate a more realistic estimate of risk. It appears that you have used default values in your calculations, which would explain the discrepancies. In addition, Superfund regulations in the National Contingency Plan have defined the protective range of excess cancer risk as a probability that a person exposed to radioactive and chemical contaminants will have an additional one in ten thousand to a one in a million chance of developing cancer (technically known as the 10^{-4} to 10^{-6} cancer risk range). Your calculations do not reflect this complete range.

October 3, 2016
SF Magazine, Chris Roberts
Question: Can we confirm what standards the HPNS cleanup are held to? Is it the 1974 AEC standards and the RESRAD calculations, or is it something else?

EPA uses the best available science to develop guidance for cleaning up sites, such as Hunters Point Naval Shipyard (HPNS), that are contaminated with radioactive materials. EPA's goal for the HPNS cleanup is to ensure that the community is protected from exposure to radiation and that the site can be used for work, recreation, and residential purposes.

To that end, EPA determines protectiveness based on risk. Other agencies may determine protectiveness based on dose, measured in millirems or other similar units. EPA's approach is to assess the health effects of radiation at a site by calculating the "excess cancer risk" posed by radioactive contamination. Excess cancer risk is the additional probability that a person exposed to contamination will develop cancer over a lifetime. Superfund regulations in the National Contingency Plan have defined the protective range of excess cancer risk as a probability that a person exposed to radioactive and chemical contaminants will have an additional one in ten thousand to a one in a million chance of developing cancer (technically known as the 10^{-4} to 10^{-6} cancer risk range). When calculating this range, EPA uses assumptions about exposure that are higher than people's actual exposure. This means that EPA overestimates the risk to make sure that cleanups are sufficiently protective.

EPA reviews the Navy's cleanup report for each survey unit (small area of land or part of a building) of HPNS using the current version of the EPA risk model, not RESRAD, to make sure that radiation levels are within the protective 10^{-4} to 10^{-6} cancer risk range. This ensures that any land that is transferred to the City of San Francisco for new use meets appropriate levels for protectiveness with regard to radiation.

EPA's risk models have changed over time as radiation science continues to improve. EPA has incorporated the latest models into its review process to ensure the HPNS cleanup continues to be protective of human health and the environment. EPA has reviewed the Navy's past HPNS cleanup reports, applying the current EPA risk model, and found that the Navy's earlier work had achieved the cleanup level needed to protect human health and the environment.

Navy cleanup documents showed requirements from multiple agencies that might apply to particular cleanups. The Navy must meet requirements specific to each of those agencies – including those that are most strict. Some of the standards that the Navy must meet may be more strict or less strict than EPA's, but the Navy still referenced them in the documents to show that by complying with the strictest standards, they also meet other requirements. The final cleanup requirements were selected in several Records of Decision that were presented in a series of public meetings, allowed at least 30 days for public comment, and then finalized.

Question: Could we find out what the inaccuracies are and what the omitted key information is?

The items in the UCSC presentation that EPA had concerns with include the following:

· **The presentation criticized EPA's reliance on 2006 cleanup standards.** In fact, EPA uses the latest version of EPA's risk model to review each Navy radiation cleanup report for individual sections of the site as they are drafted. ("Latest version" refers to whichever version is current at the time that EPA reviews each report.)

· **The presentation suggested that the Navy should be using standards with exposure scenarios that reflected only one end of the range that EPA considers protective.** In fact, the Navy and EPA assessments of cleanup needs are already based on scenario assumptions of exposure that are higher than would be realistic. As stated above, Superfund regulations define the protective range to refer to a probability that a person exposed to radioactive and chemical contaminants will have an additional one in ten thousand to a one in a million chance of developing cancer. The presentation did not reflect this complete range. Finally, the Navy

routinely cleans up radiation to levels within the protective range, even with the current model and with a scenario of exposure higher than realistic at this site.

· **The presentation criticized the fact that the Navy's documents reference several different cleanup requirements.** In fact, Navy cleanup documents showed requirements from multiple agencies that might apply to particular cleanups. The Navy must meet requirements specific to each of those agencies – including the most strict. Some of the standards that the Navy must meet may be less strict or more strict than EPA's, but the Navy still referenced them in the documents to show that by complying with the strictest standards, they also meet other requirements. The final cleanup requirements were selected in several Records of Decision that were presented in a series of public meetings, allowed at least 30 days for public comment, and then finalized.

September 23, 2016
NBC Bay Area, Liz Wagner
Question: We are seeking comment to the Navy's agreement not to transfer any more land at Hunters Point until investigations into Tetra Tech are completed. We are on deadline and need a response asap today.

Answer: Regarding your request for a comments, EPA stands by the summary provided in the Sept. 13 letter ([HYPERLINK "https://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/5723b916c5f3e5c08825802f0068cdda/$FILE/20829317.pdf/9%2013%202016%20EPA%20DTSC%20Ltr%20to%20Navy%20re%20Tetra%20Tech.pdf"]).

September 22, 2016
SF Bay View, John Shutt
Regarding your request for a comment on the July meeting with the Navy, EPA stands by the summary provided in the Sept. 13 letter.

As for which agencies are investigating Tetra Tech's work, the ones we know about are those by the Nuclear Regulatory Commission (described here: [HYPERLINK "http://www.nrc.gov/docs/ML1621/ML16211A133.pdf"]) and the Navy. Here is contact information for both groups:

- Diane Screnci, NRC public affairs officer: 610-337-5330
- William Franklin, Navy public affairs officer, (619) 524-5433, [HYPERLINK "mailto:william.d.franklin@navy.mil"].

Follow-up question: Is the EPA also investigating?
Answer: Any ongoing investigation would be of a confidential nature and therefore not something we could discuss.

September 22, 2016

SF Magazine, Chris Roberts

Question: Attached is a powerpoint presentation put together by academics at UC Santa Cruz. It has a few key findings, the summation of which is that the Navy is using cleanup standards that are outdated or otherwise more lax than current standards.
Specifically, the findings are:

*The Navy is using preliminary remediation goals, or PRGs, from 1991, when there are more current standards available;

*The Navy is using a regulatory guide from the Atomic Energy Commission from 1974, when that commission no longer exists and where there are more updated regulatory guides;

*The Navy's cleanup standards allow exposure of 25 millirems of radiation per year, when the EPA says no more than 12 millirem is the standard;

*The Navy's cleanup standards allow for a cancer risk of one in ten thousand, or 1x10^4, when the normal CERCLA goal is 1x10^6, or one in a million;

*The Navy is using a RESRAD calculator to determine risks, when the EPA says that is not to be used.

That's about it. Let me know if EPA was aware of this presentation and if it can offer comment.

Answer: Thank you for your question about the UC Santa Cruz presentation on Hunters Point Naval Shipyard. Here is some background information about it:

The Navy is the lead agency responsible for the investigation and cleanup of HPNS, because it is a former military site. However, the U.S. Environmental Protection Agency and its state regulatory agency partners (the CA Dept. of Public Health and the CA Dept. of Toxic Substances Control) oversee and enforce the Navy's compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (commonly known as Superfund), to ensure the cleanup protects human health and the environment.

On April 21, 2016, a small group of faculty and students from UC Santa Cruz gave a presentation about the HPNS cleanup at an Environmental Justice Task Force Meeting held in the Bayview-Hunters Point neighborhood; EPA was in attendance. The presentation had inaccuracies and left out some key information. EPA has had several meetings with Dan Hirsch (UC Santa Cruz), Greenaction, and the Environmental Justice Task Force, to go over issues we found with the presentation and discuss the concerns raised by these groups.

EPA uses the best available science to evaluate the protectiveness of cleanup at sites, such as HPNS, that are contaminated with radioactive materials. EPA remains committed to ensuring that the Bayview-Hunters Point community is protected from exposure to radiation and that the HPNS site can be used for work, recreation, and residential purposes.

September 20, 2016

KQED, Ted Goldberg
Question: Is the transfer of land at Hunters Point from the Navy to San Francisco on hold due to safety concerns? And, just to be clear – when was it delayed and why.

Answer: Thank you for your query; please see below for our response. Also, in case you don't already have it, I am attaching a copy of the related letter from EPA and DTSC to the Navy.

> U.S. EPA met with officials from the Navy and the California Department of Toxic Substances Control on July 14, 2016. At that time, it was agreed that the Navy would not propose any further transfers of property from the Hunters Point Naval Shipyard until ongoing investigations into work done by Navy contractor, Tetra Tech, were resolved. This decision was made in compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (commonly called the Superfund law), to ensure the cleanup protects human health and the environment.

[EMBED Acrobat.Document.DC]

June 8, 2016
NBC Bay Area, Liz Wagner

QUESTION: In an email below, you said the UCSC presentation had some inaccuracies. What specifically is inaccurate?

ANSWER: The UCSC presentation left out certain relevant information; some of the key omissions include the following:

- EPA has incorporated the latest version of EPA risk models into its review process to ensure the HPNS cleanup continues to be protective of human health and the environment. EPA has reviewed the Navy's past HPNS cleanup reports, applying the current EPA risk model, and confirmed that the Navy's earlier work had achieved the cleanup level needed to protect human health and the environment.
- The Navy and EPA assessments of cleanup needs are based on scenario assumptions of exposure that are higher than realistic. In part, this is because the assumptions of exposure do not take into account the protective cover that the Navy is installing.
- EPA considers the protective range to refer to a probability that a person exposed to radioactive and chemical contaminants will have between one in ten thousand (10^{-4}) and one in a million (10^{-6}) greater chance of developing cancer. The presentation did not reflect this complete range.

QUESTION: Does the EPA agree that Superfund law requires Hunters Point must be cleaned up consistent with EPA Superfund guidance?

ANSWER: EPA creates guidance to implement laws and regulations so that programs can be implemented more consistently. If site specific conditions suggest variation from EPA guidance would be more suitable, EPA has that flexibility.

QUESTION: The UCSC team said the Navy's cleanup has been using standards that violate this requirement and that the Navy is using standards that the EPA said should not be used. Does the EPA refute this?

ANSWER: EPA incorporates the latest EPA risk models into its review process to ensure the HPNS cleanup continues to be protective of human health and the environment. EPA has reviewed the Navy's past HPNS cleanup reports, applying the current EPA risk model, and confirmed that the Navy's earlier work had achieved the cleanup level needed to protect human health and the environment.

QUESTION: The UCSC team said the EPA either didn't catch or allowed the Navy to use cleanup standards that are much more lax than what the EPA has said is protective of public health. Does the EPA refute this?

ANSWER: EPA reviews the Navy's cleanup report for each survey unit (small area of land or part of a building) of HPNS using the current version of the EPA risk model to make sure that radiation levels are within the protective 10^{-4} to 10^{-6} cancer risk range. This ensures that any land that is transferred to the City of San Francisco for new use meets appropriate levels for protectiveness with regard to radiation. To provide additional protection, the Navy is installing a protective cover over the whole site. The Navy is also developing a plan for each parcel that is transferred to the City, which EPA will review, that ensures the Navy or City will maintain and inspect the cover indefinitely.

June 6, 2016
NBC Bay Area, Liz Wagner
Question: Since the EPA will not grant an interview request and has canceled our scheduled phone call, can you please send a statement that we can include in our report? Additionally, we ask that the EPA please answer in writing the questions below for clarification purposes.

We would like to have a conversation with the EPA for clarification purposes, as well. As stated, we are under deadline and a conversation and written material needs to happen by COB today.

We understand that the EPA's position is that the Navy is the lead agency responsible for the cleanup and investigation of Hunters Point.

- As the government entity that is in charge of federal superfund sites and the agency that is overseeing the Navy's cleanup of Hunters Point, why would the EPA defer to the Navy?
- Can't the Navy speak about its own oversight of the Navy?

Dan Hirsch of UCSC said that in a phone call with EPA Region 9 and EPA headquarters, the officials at EPA headquarters said his analysis is correct—the region should not have used a 25 millirem per year standard or the Atomic Energy Commission's 1974 guide, and that averaging contamination across a site should not be used.

- Can the EPA confirm that the EPA headquarters agreed that these standards should not be used?
- Can the EPA confirm that the Navy shouldn't have used the standards referenced above?

We received the EPA's background information below. You said the UCSC presentation had *some* inaccuracies and left out some relevant information.

- What did the UCSC presentation include that was *correct*?
- Is the UCSC group correct in that the EPA should not have allowed the Navy to use the cleanup standards referenced above?
- Is the EPA saying that even if the Navy cleaned up to the standards referenced above, the EPA believes the risk that remains after the cleanup is still acceptable from a public health standpoint?

Isn't it true that for the cleanup of buildings and other structures, and equipment and waste, the Navy used a standard of 25 millirem per year and the Atomic Energy Commission's 1974 Regulatory Guide 1.86?

Isn't it true that EPA has repeatedly said that 25 millirem per year is not protective of public health and should not be used as a cleanup standard at Superfund sites?

- If so, why did the EPA allow the Navy to use that standard?

Isn't it true that EPA generally does not approve the use of the 1974 AEC Regulatory Guide at Superfund cleanups?

- If so, why did the EPA allow the Navy to use that standard?

Isn't it EPA's policy that Superfund cleanups at federal facilities are to employ EPA's Preliminary Remediation Goals?

- Why did the EPA allow the Navy to instead employ the non-EPA RESRAD model for estimating risk?

Isn't it true that EPA's guidance prohibits averaging contamination across an area like Hunters Point?

Please explain what the Navy's "protective cover" is.

Please explain what the each of the EPA's risk models are.

Response:
Below are answers to your follow-up questions about EPA's oversight role and the cleanup standards used at Hunters Point Naval Shipyard (HPNS).

EPA helps protect human health and the environment by managing the cleanup of hazardous waste sites across the nation. In the case of former military sites, such as HPNS, the Department of Defense is the lead for the investigation and cleanup. In overseeing the Navy's cleanup of Hunters Point, EPA's goal is to ensure that the community is protected from exposure to radiation and that the site can be used for work, recreation, and residential purposes.

Because the Navy is the lead for HPNS, EPA suggested that NBC Investigative News direct its request for an on-camera interview to the Navy. EPA has provided written information about its oversight role and remains willing to answer follow-up questions.

You asked about the Navy's reference to a 25 millirem per year standard. EPA does not express cleanup standards in terms of millirem per year, which is a dose-based approach, but instead evaluates protectiveness in terms of risk. Even though the Navy's documents reflect a dose-based

approach, EPA in its oversight capacity independently reviews the Navy's cleanup reports to make sure that radiation levels are within the protective 10^{-4} to 10^{-6} cancer risk range. EPA has confirmed that the Navy's cleanup meets EPA standards.

Regarding averaging across the site, the actual exposure from radionuclides is based on looking at concentrations from multiple locations across an area, not from just a single point. Therefore, EPA is using the standard approach in the "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM). This approach is widely used by multiple agencies, including EPA.

The protective cover is a part of the cleanup that is required throughout the HPNS. The cover provides a physical barrier that can consist of asphalt, a soil cap at least two feet thick, or a concrete building foundation.

The EPA's risk model is called the Preliminary Remediation Goal (PRG) Calculator. More information about this model is available at this website: [HYPERLINK "https://epa-prgs.ornl.gov/radionuclides/"]

June 3, 2016
NBC Bay Area, Liz Wagner
Please see below for information about our work at Hunters Point.

The Hunters Point Naval Shipyard (HPNS) is a former military base in San Francisco, California. It was used by the Navy as a naval submarine and ship repair facility from 1945 until 1974 and was also the site of the Naval Radiological Defense Laboratory from 1948 to 1969. In 1989, U.S. EPA placed the Shipyard on its National Priorities List, which is a list of federal Superfund sites in the United States.

The Navy is the lead agency responsible for the investigation and cleanup of HPNS. As part of the process, EPA and its state regulatory agency partners (the California Department of Public Health and the California Department of Toxic Substances Control) oversee and enforce Navy compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (commonly called the Superfund law) to ensure the cleanup at HPNS protects human health and the environment. The Navy and regulatory agencies work together to decide how to address the contamination. The Navy also gathers community input through a public process.

EPA uses the best available science to develop guidance for cleaning up sites, such as HPNS, that are contaminated with radioactive materials. EPA's goal for the HPNS cleanup is to ensure that the community is protected from exposure to radiation and that the site can be used for work, recreation, and residential purposes.

EPA assesses the health effects of radiation at a site by calculating the "excess cancer risk" posed by radioactive contamination. Excess cancer risk is the additional probability that a person exposed to contamination will develop cancer over a lifetime. Superfund regulations in the National Contingency Plan have defined the protective range of excess cancer risk as a probability that a person exposed to radioactive and chemical contaminants will have between an additional one in ten thousand and a one in a million chance of developing cancer (technically known as the 10^{-4} to 10^{-6} cancer risk range). When calculating this range, EPA uses assumptions about exposure that are higher than people's actual exposure. This means that EPA overestimates risk to make sure that cleanups are sufficiently protective.

EPA reviews the Navy's cleanup report for each survey unit (small area of land or part of a building) of HPNS using the current version of the EPA risk model to make sure that radiation levels are within the protective 10^{-4} to 10^{-6} cancer risk range. This ensures that any land that is transferred to the City of San Francisco for new use meets appropriate levels for protectiveness with regard to radiation. To provide additional protection, the Navy is installing a protective cover over the whole site. The Navy is also developing a plan, which EPA will review, that ensures the Navy or City will maintain and inspect the cover indefinitely.

EPA's risk models have changed over time as radiation science continues to improve. EPA has incorporated the latest models into its review process to ensure the HPNS cleanup continues to be protective of human health and the environment. EPA has reviewed the Navy's past HPNS cleanup reports, applying the current EPA risk model, and found that the Navy's earlier work had achieved the cleanup level needed to protect human health and the environment.

University of California at Santa Cruz Presentation

On April 21, 2016, a small group of faculty and students from the University of California at Santa Cruz gave a presentation about the HPNS cleanup at an Environmental Justice Task Force Meeting held in the Bayview-Hunters Point neighborhood. The presentation had some inaccuracies and left out some relevant information, as noted below.

The presentation criticized EPA's reliance on 2006 cleanup standards.

- In fact, EPA uses the latest version of EPA's risk model to review each Navy radiation cleanup report for individual sections of the site as they are drafted. ("Latest version" refers to whichever version is current at the time that EPA reviews each report.)

The presentation suggested that the Navy should be using standards with exposure scenarios that reflected only one end of the range that EPA considers protective.

- In fact, the Navy and EPA assessments of cleanup needs are already based on scenario assumptions of exposure that are higher than would be realistic. In part, this is because the assumptions of exposure do not take into account the protective cover. In addition, EPA considers the protective range to refer to a probability that a person exposed to radioactive and chemical contaminants will have between one in ten thousand and one in a million greater chance of developing cancer. The presentation did not reflect this complete range. Finally, the Navy routinely cleans up radiation to levels within the protective range, even with the current version of worst case scenario assumptions.

The presentation criticized the fact that the Navy's documents reference several different cleanup requirements.

- In fact, Navy cleanup documents showed requirements from multiple agencies that might apply to particular cleanups. The Navy must meet requirements specific to each of those agencies – including the most strict. Some of the standards that the Navy must meet may be less strict than EPA's, but the Navy still referenced them in the documents to show that by complying with stricter standards, they also meet other requirements. The final cleanup requirements were selected in several Records of Decision that were presented in a series of public meetings, allowed at least 30 days for public comment, and then finalized.

March 25, 2016
NBC Bay Area, Liz Wagner

Q. Can you please let us know what if any action the US EPA has taken in response to the admission by Navy contractor Tetra Tech that it falsified data and mishandled soil samples on Hunters Point? Has the US EPA reviewed any samples or required a resampling of any parcels on Hunters Point? If so, who performed the review? What was found?

A. The Navy is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard (HPNS). EPA and its state regulatory agency partners oversee and enforce Navy compliance with the Comprehensive Environmental Response Compensation and Liability Act (commonly called the Superfund law) to ensure the cleanup at HPNS protects human health and the environment.

In 2012, the Navy's internal quality control review of work by its contractor, Tetra Tech, discovered discrepancies from the results they would have expected in some HPNS soil samples taken after removal actions. Subsequently, Tetra Tech conducted an internal investigation, resampled the areas of concern, and excavated soil that had levels of contamination above health-based cleanup goals. The Navy hired an independent contractor to oversee work of Tetra Tech and other contractors at HPNS. Tetra Tech summarized their actions in a report to the Navy dated April 2014.

EPA—along with the California Department of Public Health (CDPH) and the California Department of Toxic Substances Control (DTSC)—reviewed the sampling results in the April 2014 report carefully. No cleanup decisions had been made using the questionable data and future cleanup decisions will be based on the corrected data.

EPA will continue to closely review information about any new allegations that come to light and to monitor the actions of the Navy and other agencies with regard to work by Tetra Tech to inform any further EPA action.

Other agencies also play roles related to radiation at HPNS. For example, the U.S. Nuclear Regulatory Commission (NRC) and CDPH oversee the licensing of radiation cleanup service providers, such as Tetra Tech. After concluding its investigation of Tetra Tech at HPNS, NRC recently issued a notice of apparent violation and is considering escalated enforcement action.

For more information on the HPNS investigation and cleanup, contact William Franklin, Navy public affairs officer: (619) 524-5433, [HYPERLINK "mailto:william.d.franklin@navy.mil"].

For more information about Tetra Tech's NRC license, contact Diane Screnci, NRC public affairs officer: 610-337-5330.

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Desk statement: Because this is a very complicated issue, we don't feel that a short interview can adequately explain the complicated issues at stake here. There's a lot of nuance. We're happy to give you answers in writing.